A Cross-Cultural Investigation of Alcohol Related Expectancies and Drinking Behaviour

by

Susan J. Rogers

A thesis submitted in partial fulfillment
of the requirements of the degree of

Master of Arts in Psychology

University of Canterbury

1994

Acknowledgements

I would like to thank Steve Hudson and Bill Black for thier assistance and guidance throughout the completion of this thesis.
Many thanks also to those who participated in this study, without whom which it would not have eventuated.
Finally, thanks to Jenny and Caroline and Jo for thier practical encouragement, and to Stewart who provided constant support

Table of Contents

Acknowledgements i
List of tables iv
List of figures iv
Abstract v

Introduction 1
Thesis outline 1
Background 1
Alcohol and culture 1
Alcohol in New-Zealand 2
History 2
Women and alcohol 3
Maori and Alcohol 4
Consumption levels 6
Cultural Differences 6
Alcohol related Problems 7
Maori problems 9
Psychological Factors in drinking in New-Zealand 10
Cognitive Variables in Alcohol Research 11
Alcohol Outcome Expectancies 13
Definitions 13
Early Anthropological Research 14
Complimentary theories 16
Social Learning Theory 16
Attribution Theory 19
Cognitive Behavioural Theory 20
Acculturation 21
The Socio-cultural Model 21
Theories of addiction 22
Expectancy Research- A literature review 24
Balanced placebo studies 24
Questionnaire studies 26
Sex Differences in Expectancy Research 30
Cross-Cultural Research 32
Implications of Expectancy Research 35
Implications for treatment 35
The Present research 37
Method 40
Sample characteristics 40
Demographic and drinking background 40
Materials 41
Drinking Background Questionnaire 42
Drunkenness 42
Scoring 43
Drinking Behaviour Questionnaire 43
Scoring 44

The Drinking Diary 45
Scoring. 46
Alcohol Expectancy Questionnaire. 46
Scoring. 48
Procedure 48
Results 50
Sample characteristics 50
Expectancies and drinking behaviour 51
Alcohol Expectancy Questionnaire 51
Drinking Behaviour Questionairre 51
The Drinking Diary 52
Drunkenness 54
Race and Expectancies 57
Expectancy strength 57
Race and Drinking Behaviour 61
Drinking behaviour questionairre 61
Drinking Diaries 61
Drunkenness 62
Sex and expectancies 62
Sex and Drinking Behaviour 65
Drinking behaviour Questionairre 65
Drinking diaries 65
Drunkenness 65
Discussion 67
Expectancies and Drinking Behaviour 67
Race and expectancies 68
Race and drinking behaviour 70
Sex and Expectancies 71
Sex and Drinking Behaviour 72
Expectancy Theory - Implications of the present research 73
Limitations of the present research 75
Limitations of the questionnaires 78
Drinking Behaviour Questionnaire 79
The Drinking Diary 80
Suggestions for future research 81
References 83
Appendices 95

List of Tables

Table One	Drinker Type By Expectancies	57
Table Two	Race By Expectancies	59
Table Three	Drunkenness By Race	62
Table Four	Sex by Expectancies	63
Table Five	Drunkenness By Sex	66

List of Figures

Figure 1: Maori and Pakeha Mean Scores: Positive Expectancies 60

Figure 2: Maori and Pakeha Mean Scores: Negative Expectancies 60

Figure 3: Male and Female Mean Scores: Positive Expectancies 64

Figure 4: Male and Female Mean Scores: Negative Expectancies 64

Abstract

International research has found alcohol related expectancies play an important role in drinking behaviours by discriminating between types of drinkers, both within and across cultures. To provide evidence for the universality and generalisability of the expectancy concept, it was applied to a cross cultural Population in New Zealand. An alcohol expectancy questionnaire was administered to 46 Maori and 43 Pakeha subjects. Drinking behaviour questionnaires were also administered. Alcohol expectancies were found to discriminate between Maori and Pakeha, and types of drinkers, supporting the utility of the Expectancy Theory for a New Zealand population, Implications of these findings are discussed, and suggestions made for future research.

Introduction

Thesis Outline

The objective of this thesis is to apply alcohol outcome expectancy theory to a bi-cultural population in Canterbury, New Zealand.

The introduction outlines the objectives of this thesis and presents reviews of alcohol research in New Zealand and expectancy research. Specifically noted are the links between alcohol and culture, and the use and abuse of alcohol in New Zealand, including history, consumption levels and alcohol related problems. Also examined is the role of cognitive variables in alcohol research, with an emphasis on alcohol related expectancies including an outline of relevant concepts. This is followed by a review of expectancy research to date. Finally, the present research is examined in relation to the previous literature.

Background

Alcohol and culture

Cultural differences in alcohol drinking patterns and behaviour have been well documented (McAndrew & Edgerton, 1969; Pittman & Snyder, 1962). Commonly observed is the detrimental effect alcohol has on ethnic subcultures. The introduction of alcohol into subcultures has produced unique patterns of behaviour and attitudes towards alcohol. Where alcohol has been introduced to a population that was formerly alcohol-free specific

problems occur, typically involving excessive and maladjustive drinking patterns. Maladjusted drinking patterns may include excessive violence when drunk and/or neglect of traditional values. Heath (1987) identified patterns of this type among the following colonised subcultures; Navaho Indians, the Nasioi of New Guinea and the Australian Aborigine.

Judgements of what is 'normal' and what is 'problem' drinking may vary according to culture. Danko, Johnson and Nagoshi (1988) found this to be the case in Hawaai, a country which includes many cultures. Comparing Hawaii's major racial groups (Hawaiians, Philippinos, Japanese, Chinese and Caucasians) they found alcohol use norms varied between these groups and were significant predictors of consumption within and across these groups.

The New Zealand Maori are a formerly alcohol-free indigenous population who were introduced to alcohol as a result of European colonisation. Maori health has suffered as a result of alcohol use to a greater extent than Pakeha health. For example, Maori males have a 1.9 times greater likelihood than non Maori males of having their deaths recorded as due to alcoholism (Sachdev, 1990).

Alcohol in New-Zealand

History

In the 1830's European immigrants began to colonise New Zealand. At this time the social constraints governing drinking behaviour in their country

of origin were not established in New Zealand. Drinking to a state of rowdy drunkenness and violence among European men was commonplace during the early years of settlement. Attempts to establish order in later years included the introduction of a minimum drinking age of twenty-one, and six o'clock closing for licensed premises. Over the last twenty years, however, liquor laws regarding drinking age and liquor trading hours have become increasingly liberal. Six o'clock closing was abolished in 1967, and the minimum drinking age lowered to eighteen.

Women and alcohol

Historically in New Zealand Women have had a different relationship with alcohol than men. The problems that females experience with alcohol were generally consequences of the excessive drinking of men rather than personal alcohol problems. In 1895 when women won the vote problems for women that resulted from male drinking were such that large numbers of women campaigned for prohibition. The campaign was successful in 1919 but the vote was swung back by corruption, and the sale of liquor remained legal. As a result prohibition did not become law until the 1920's.

Over the last thirty years women's drinking patterns have changed as a result of a more tolerant social attitude towards women and alcohol. Confirming this trend, women's drinking statistics show that in the 1960's one in five women had never drunk, while in 1978 only one in seventeen had never drunk. However, there were, and continue to be, major differences between men's and women's consumption of alcohol. For

example, females drink considerably less than males (Casswell, 1988) possibly because females face more health risks than males from the consumption of alcohol and are more likely to be victims of alcohol related violence.

In addition to different patterns of alcohol consumption for women, the aetiology of alcohol problems is likely to be different for females than for males. For example, Chetwynd & Pearson (1983) found almost 15% of New-Zealand women who work in the home to be problem drinkers. They identified seven major factors associated with this drinking. These included: A family history of heavy drinking, depression, stress level, major life changes, reported alcohol consumption, type of leisure activities and abuse of substances such as coffee and tobacco. The likelihood of problem drinking increased substantially with the number of adverse factors reported.

Maori women appear to have different patterns of drinking than Pakeha women. For example, there are more female Maori abstainers than female Pakeha abstainers. However, heavy drinking is more likely to occur in young Maori women than young Pakeha women (Murchie 1984).

Maori and Alcohol

As noted above, prior to European colonisation of New-Zealand Maori had no intoxicants, and were unaware of the fermentation process. Initially, Maori viewed alcohol negatively , calling it Wai-piro or foul and stinking water. Prophetic movement such as Parihaka, Tariao, Rua Kenana and

Ratana practised abstinence. However Maori progressively adopted the habit of drinking, and liquor was commonly used by the Pakeha to trade for Maori land, commodities and services. Maori alcohol related problems increased to the extent that Governor Grey passed the sale of liquor ordinance in 1847, prohibiting the sale of liquor to Maori. Maori abuse continued despite this. By the 1880's and '90's male drunkenness was having such adverse effects on the lives of Maori and Pakeha women that they joined in the 1880's and 1890's to fight against male alcohol problems. This resulted in a period of Prohibition in the nineteen twenties. In 1948 Maori were granted equal rights to buy liquor (Sachdev, 1990).

The Maori are now a subculture in New-Zealand, living within the dominant European culture. Traditional socialisation processes have been diluted, especially in urban areas where the links with the land and heritage have weakened. The process of acculturation has meant an adoption of much of the lifestyle and values of the dominant European culture. Because of this similarities to Pakeha New - Zealanders in alcohol research may be anticipated for Maori. However, Maori and Pakeha still form two distinct cultural groups in New - Zealand. Research revealing differences in the way Maori and Pakeha view themselves and others provides support for this fact. For example, Graves and Graves (1985) found Pakeha viewed the Maori as happy, easy going and friendly whereas Maori saw Pakeha as arrogant, materialistic selfish and aloof.

Consumption levels

New Zealand has traditionally recorded relatively high rates of alcohol consumption. In 1987 a comparison of 32 countries showed that New-Zealand rated 19th in alcohol consumption, and was place 6 for beer, 18 for wine and 21 for spirits (Orchard, 1991)). Total alcohol consumption has fallen in the last two decades. In 1971 average consumption per adult was 177 litres of beer, 9.75 litres of wine and 3.75 litres of spirits. Twenty years later, in 1991 this average was 141 litres of beer, 21.75 litres of wine and 4.5 litres of spirits. (ALAC, 1991) Males account for 60% of the alcohol consumption and females the remaining 40% (Bailey 1984-5; Casswell, 1980).

Cultural Differences

Alcohol consumption patterns vary with race and sex. A study by Casswell (1980) found that men report much greater amounts drunk on their last drinking occasion than do either Pakeha men or women. The average drinking intensity of Maori was found to be higher than Pakeha respondents. However, the study found only a small difference in median drinking intensity between Maori and Pakeha, indicating the higher average may be due to heavy drinking by a small proportion of the drinkers. Further support for this comes from Bailey (1991), who found that have a higher proportion of heavy drinkers who drink greater quantities of alcohol than European New-Zealanders.

An observational study undertaken in hotels and taverns in Auckland by Graves, Graves, Semu & Sam (1982) found evidence for unique drinking behaviours within the culture. The researchers found that social rituals and cultural predisposition accounted for patterns of ethnic drinking. For example, group size and time spent drinking accounted for 69% of ethnic differences in consumption. On a drinking occasion Maori were found to drink significantly more, and in larger groups than Pakeha. The authors concluded that the levels of alcohol consumption they observed among drinkers were a result of learned patterns of interpersonal behaviour that limit the behaviour of all drinkers regardless of ethnic background. Cultural norms appeared to be important in this regard.

Alcohol related Problems

Survey data indicate there is a major problem with alcohol in New-Zealand. New-Zealanders relationship with alcohol is reflected negatively in our criminal statistics. One of the most widespread criminal problems involving alcohol in this country is drunk driving. In New-Zealand alcohol is responsible for half the fatal road accidents and nearly a quarter of all serious injury accidents. Alcohol is also heavily implicated in domestic and social violence. Three quarters of violent offenders have been drinking and alcohol is involved in approximately 90% of domestic disputes (ALAC, 1991)

To investigate the drinking patterns of New Zealanders Casswell and Wyllie (1980) conducted a nationwide survey of 1680 people aged between 14-65. A large number of respondents (44%) viewed their own drinking as problematic, suggesting that alcohol problems affect a large section of the community. Statistics such as these reveal a major problem with alcohol in this country.

Casswell & Wyllie (1980) found alcohol and the social situation involving alcohol consumption played an important role in the lifestyle of the large majority of respondents. The study found that 'going to the pub' was an attractive way to pass time and as such respondents felt it was a reasonable way to spend a relatively large portion of their income. Consuming large quantities of alcohol resulting in drunkenness was viewed as an acceptable and sometimes inevitable conclusion to a drinking occasion. Casswell and Wyllie (1980) also found there was a general acceptance of violence as a result of drinking particularly in the pub situation. Perceptions of peer drinking appeared to have a significant effect on drinking behaviour, as some of the respondents considered keeping up with their friends an important aspect of drinking. The authors concluded that there are certain expectations of the kind of behaviour which follows alcohol consumption and these norms may legitimise even violent behaviour. Popular beliefs about the effect of alcohol appeared to turn into self fulfilling behaviours. The importance of findings such as these is that they reveal motivations for drinking in this country, and in doing so indicate the importance of cognitions in alcohol related behaviour in New Zealand.

Maori problems

As with patterns of drinking, there appear to be differences between Maori and Pakeha in type and severity of drinking problems. Maori are increasingly worse off than Pakeha in terms of vulnerability to alcohol abuse. For example, increasing urbanisation has resulted in increased unemployment for Maori people. Lower incomes and socio-economic status increase the risk of alcohol abuse partly due to such cognitive factors as boredom and frustration (Sachdev 1990).

Maori in New Zealand are also at a disadvantage in terms of general health. The undermining of traditional methods and processes of health care is accentuated by an eroding of the factors traditionally seen as responsible for good mental health, That is, Land (whenua), family (whanau) and language (reo). In the past, health care for Maori was a function of the community and health leadership came from political and spiritual leaders. However, this spiritual base has been replaced by a western scientific base and elders have been replaced by professionals. This undermines the role of the family and community. As this negative trend has escalated it has had a detrimental effect on well-being.

Alcohol problems among have tended to grow as general well-being declines. First admissions for alcohol abuse and dependence to psychiatric hospitals for have increased steadily since the 1950's and markedly in the 1980's (Durie, 1985; Sachdev, 1990). Maori health has been found to have suffered as a result of alcohol use. For example, Maori males are 1.9 times

as likely as non Maori to have their deaths recorded as due to alcoholism (Smith & Pierce, 1984). Maori men had a relative risk of 1.8 for cirrhosis of the liver, and have a higher rate of mortality from alcohol related diseases than Pakeha (Sachdev, 1991).

In an investigation of the ethnicity of drunk drivers in New-Zealand, Bailey (1991) found differences in and European drink driving statistics. For example, Maori account for approximately 70% of drinking drivers. Although the rate of drunken driving goes down with age for Europeans, drunk driving incidents increase to age 24, decrease to age 44 then increase again to age 64. (Ritchie & Ritchie, 1985)

Psychological Factors in drinking in New-Zealand

Although he research described above suggests cultural norms, social learning processes and subsequent psychological processes are important factors in determining drinking behaviours in New Zealand, there has been little research in New-Zealand examining the psychological processes which underlie drinking behaviours. That which has been conducted has been gender specific, and the results cannot be generalised

In a study of the use of alcohol by 18 to 29 year old male New-Zealanders Casswell and Wyllie (1991) sought to identify underlying psychological factors and motivations in drinking behaviour using qualitative methods including interviews and group discussions. Eighteen to 29 year old males were selected for investigation as this group are the heaviest drinkers and are involved in more alcohol related problems than other age groups.

Casswell and Wyllie (1991) identified self esteem as a key variable in levels of drinking. The lower the self esteem of a group, the more pressures there appeared to be within the group to drink. Drinking was seen by these men as symbolic of inclusion in a group. Typical of qualitative research the sample size was small (10 people). To obtain a representative sample the subjects were chosen according to predetermined criteria, and the results were not intended to generalise to a broader population.

In a cross cultural study of attitudes, motivations and practices towards alcohol consumption, Archer (1990) found Maori and Pakeha to be similar in psychological factors relating to alcohol. However, this research also indicated differences in specific areas of drinking behaviour. For example, Archer suggested cultural differences in drinking patterns were marked in situations involving ritual, particularly at Tangi (Funerals). Tangi involve a large gathering on the Marae, over a longer period of time than the funeral. Typically alcohol is consumed after the burial. In these situations, Archer suggested that the example of excessive alcohol consumption by parents may influence the young in their drinking behaviour, indicating specific differences in social learning processes and possibly subsequent cognitions.

Cognitive Variables in Alcohol Research

During the last 15-20 years there has been an increased awareness of the role of cognitive variables in determining drinking behaviour. This occurred primarily because variance in drinking behaviour between cultures could

not be adequately explained by the analysis of the pharmacological effects of alcohol on behaviour. Early anthropological studies revealed the importance of cultural influences on an individuals drinking behaviour. Subsequent psychological research has provided evidence that pharmacological effects by themselves may indeed be insufficient to either develop or maintain an abusive use pattern (Marlatt & Donovan, 1981), and researchers have sought to identify the intervening variables in this process. In the context of drinking behaviour, cognitive variables include an individuals attitude towards alcohol, beliefs about alcohol and the expectation of alcohol's effects on behaviour. The strongest body of research involving cognitive variables and alcohol emphasises the importance of alcohol outcome expectancies. Alcohol outcome expectancies involve an individual's expectation of alcohol's effect on behaviour, and form the basis of Expectancy Theory as it is applied to alcohol. Stacy, Widaman and Marlatt (1990) compared expectancy models with attitudinal models of alcohol use and found support for the validity of expectancy constructs, and distinctions among expectancy and attitude constructs in terms of strong discriminate validity, absence of self-report bias and differential prediction of alcohol use. Expectancy research has also found expectancies predict drinking behaviour better than demographic variables such as age and race (Brown, 1980; Christiansen & Goldman 1983).

Alcohol Outcome Expectancies.

Definitions

Definitions of outcome expectancies within the literature to date have been inconsistent and frequently unclear. However, the following components of the concept are consistent throughout the literature.

The first agreed upon component of expectancies is that they are cognitive variables. Distinct from attitudes and beliefs, expectancies involve the anticipation of a relationship between events or objects in the future. This anticipation is based on previous knowledge and perceptions. The perception of alcohol's functions is sufficient for the expectancy effect whether or not it conforms to objective reality. That is, the expectation of positive effects from alcohol functions independently of the actual outcome of a drinking event (Lang, Goekner, Adesso, & Marlatt, 1976).

Social learning processes form the background to Expectancy Theory, and are basic to definitions of expectancies. The decision to initiate a drinking episode is assumed to be at least partly determined by the individual's culturally learned belief that alcohol will serve certain functions or result in certain desirable consequences such as relief from tension or enhancement of mood. Drinking behaviour is then maintained by ongoing expectations of alcohol's ability to result in these desired outcomes. Expectancies can therefore be seen not only as mediators of alcohol effects but also as risk factors that effect initiation and maintenance of drinking behaviour (Goldman, Brown, & Christiansen, 1987).

Alcohol outcome expectancies can be positive or negative. For example positive expectancies include mood enhancement, improved social functioning or increased sexual functioning. Negative expectancies may include such things as perceptions of cognitive impairment or long and short term physical effects. Positive expectancies motivate the individual to act in certain ways because these behaviours are predicted to lead to desired outcomes. Conversely, negative expectancies motivate an individual to avoid certain behaviours which are perceived to lead to undesired outcomes (Warburton 1990). Because Positive expectancies provide greater power to discriminate between types of drinkers than negative expectancies, they are more useful in determining drinking behaviour.

Early Anthropological Research

Expectancy theory in relation to alcohol has it's roots in the early anthropological studies of McAndrew and Eagerton (1969). They combined world- wide historical and ethnographic data to demonstrate that an individual's drunken behaviour is learned in ways that fit the expectations of the population, rather than being a direct result of the drug alcohol. Having observed widely varying responses to drinking between cultures they concluded that whatever the drinking behaviour, it appears to be bound by social limits. For example, the Abipone Indians and the Yuruna Indians of South America are cultures which have extremely different behavioural responses to alcohol consumption. The Abipone Indians who when sober are a calm, peace-loving people, were observed under the influence of alcohol to transform into behaving as savages. In contrast, the

Yuruna Indians are a warlike head-hunting tribe living in the South American rain forest. Although observed to consume large amounts of alcohol, they become withdrawn, quiet and mild in their behaviour as a result of drinking. McAndrew and Eagerton suggest that this variance in drinking behaviours may be explained in part by their cultural appropriateness. Although a societies' drunken behaviour may differ markedly from their sober behaviour it may still be subject to the societal constraints as determined by the social attitudes of that society. McAndrew and Eagerton concluded that

" drunken comportment is an essentially learned affair. Over the course of socialisation, people learn about drunkenness what their society 'knows' about drunkenness; and, accepting and acting upon the understandings thus imparted to them, they become the living confirmation of their societies teachings" (McAndrew & Eagerton, 1969 pg 88).

Other early anthropological researchers came to similar conclusions. Bales (1946) compared Jewish and Irish drinking patterns and their outcomes. Orthodox Jews, who had been introduced to wine as an integral part of religious ritual , showed an absence of alcohol related problems, although all of them occasionally drank. However, Irish-Americans who were forbidden to drink before reaching adulthood were first exposed to alcohol as an initiation into manhood where getting drunk was an integral part of

this. Bales found this group significantly more likely to progress to the point where they suffered alcohol related problems in their physical and mental health (Chaurdon & Wilkinsen, 1988).

Complimentary theories

Expectancy theory is consistent with various other psychological and anthropological theories.

Social Learning Theory

Expectancy theory is based on the principles of Social Learning Theory. From a social learning perspective, drinking is initiated and maintained largely as a result of perceptions of the events or circumstances associated with alcohol use. Beliefs or expectations about the values and limits of others regarding drinking appear to be important in this regard (Grube, 1989).

Central to social learning theory are social reinforcement processes. In relation to alcohol, drinking behaviour is partially determined by the reinforcement an individual expects to receive as a consequence of consuming alcohol. Personality characteristics, general predispositions and socio-demographic variables are of secondary importance in determining drinking and are largely mediated through alcohol specific beliefs. Social influences may include family, peer group, and culture (Thombs, 1987).

Consistent with the social learning approach much expectancy research indicates drinkers are less likely than non-drinkers to believe that drinking will harm their health, make them act foolishly or make them feel sick. Conversely they are more likely to believe that it will make them feel good or forget their problems (Christiansen & Goldman, 1983) Similarly, young drinkers are more likely to report that their parents, peers and other significant referents drink more and are less disapproving of drinking. Perceptions of peer drinking appear to be particularly important in this regard (Mooney, 1991). Recent literature suggests that expectancies may form a link between early learning experiences and decisions to drink later in life. Christiansen et al 1989 measured the power of expectancies in group of young adolescents to predict the beginning of drinking and subsequent drinking behaviour. Expectancies were measured at two points in time, one year apart. Their results revealed the discriminative value of expectancies on five of seven expectancy scores. Familial factors appear to strongly influence the development of expectancies. Comparing a sample of 253 children of alcoholic with 237 children of non-alcoholics, Sher (1991) found children of alcoholics reported more alcohol and drug problems and stronger alcohol expectancies.

Observational learning plays a central role in alcohol related behaviour. Parental and societal influences including the mass media are the major influences for learning by observing others actions and the acquisition of information about alcohol by vicarious means. Patterns definitive of a particular culture are likely to be maintained by this means. Alcohol related

behaviour appears to be particularly susceptible to this type of learning, as cross cultural researchers have demonstrated. Recent studies involving children of alcoholics also provide support for this relationship (Sher 1991). From an expectancy viewpoint it is information about the relationship between alcohol consumption and certain outcomes that is learned. An individual drinks because it is anticipated to result in the attainment of desired outcomes.

The strong influence of family in the development of expectancies is supported by increasing evidence that expectancies are learned early in life (Brown, 1980). Although they become more refined with drinking experience, well developed expectancies exist prior to any personal alcohol consumption (Christiansen, 1982). In addition, expectancies are resistant to corrective information (Gustafson, 1986), and are reasonably consistent across situations , indicating the strength of the social learning process.

An extension of familial modelling to community or cultural modelling is evident from the literature. Appropriate drinking behaviour for ones' status in the group appears to be a culturally learned concept for example, distinct sex roles within a drinking context.

As alcohol is an acquired taste, and is initially repellent, the learning process by which an individual is introduced to may be of ultimate importance in determining subsequent perceptions of alcohol's qualities and actual alcohol use. Social Learning Theory provides the basis on which

expectancies can be viewed as cognitive representations of past direct and indirect learning experiences with alcohol.

Attribution Theory

The concept of expectancy is inextricably linked with that of attribution theory. Attribution theory is concerned with the explanations that individuals construct for their own behaviours and those of others. Goldman and Christiansen (1987) view the link as reciprocal. A causal attribution is necessary to hold an expectancy, and an expectancy is an outcome of an attribution that is,. when one holds an expectancy one must have previously attributed a causal relationship of the events in question, and when one attributes a relationship, one ends up holding an expectancy.

Goldman et al (1987) also note that Attribution Theory emphasises the deliberate search by human beings for causal attributions, rather than mere passive observations of correlations between events. Attribution theory involves theorising to explain everyday behaviours, relying not only on direct observation, but also already established theories of behaviour. This cause - effect analysis is a response by individuals observing and seeking to explain everyday behaviours. For example, an observation of an individual hitting another may be attributed to a violent nature, despite the actual cause of the behaviour. Attributions may be external or internal. With internal attributions the cause of the behaviour is thought to lie within the personality of the individual, whereas with external attributions the behaviour is thought to be due to situational or environmental factors.

Expectancies are therefore reinforced by the attribution process. The confirmation of a previously held expectancy of behaviour is attributed to personality or other internal traits of the individual and behaviours that are inconsistent with expectancies are attributed to external causes (Shaw & Costanzo 1982).

Cognitive Behavioural Theory.

According to the cognitive behavioural approach no learning process is seen as exclusively capable of explaining the aetiology of problem drinking. Emphasis is laid on individual comprehension that particular stimuli and certain responses predict the arrival of certain outcomes (George & Marlatt, 1989).

Perceived stimuli and contingencies may take on as much importance as actual ones; that is, an individuals belief that the occurrence of certain stimuli and certain responses predict the arrival of particular outcomes may function independently of reality or the actual drug effect.

Two types of alcohol expectancies can be identified in this context: alcohol efficacy expectancies and alcohol outcome expectancies. Outcome expectancies are primarily transmitted by the culture whereas alcohol efficacy expectancies have an individual emphasis. Literature to date has concentrated on alcohol outcome expectancies and it is these with which this study is concerned.

The Cognitive Behavioural approach has important implications for treatment of alcohol problems. From an expectancy viewpoint manipulation of individual expectancies, once identified, may help to modify associated behaviours. Implications for treatment are discussed in more detail in ensuing sections.

Acculturation

Acculturation is an anthropological term defined by the Social Science Research Council (1954) as culture change that results from continuous first-hand contact between two distinct cultural groups Although developed to describe group processes, it is now recognised as an individual phenomenon. Psychological acculturation occurs as original political, economic, technical, linguistic, religious and social institutions become altered or new ones take their place. Psychological changes are involved with this adaptive process. From an expectancy viewpoint, the acculturative process may influence the relative importance, strength and type of alcohol expectancies.

The Socio-cultural Model

The Socio-cultural model of alcohol use arose out of early Anthropological research. It emphasises the link between cognitive factors and behaviour. It holds that different beliefs and attitudes about alcohol and it's effects, are directly related to the frequency with which problems are associated with drinking, and to differences in specific problems in various cultures.

According to this theory in any given society it is the propriety of a given alcohol related behaviour, culturally determined, that determines it's nature, rather than a pure drug effect. Recent observational studies across cultures have encouraged similar conclusions. For example, In an observational study Johnson & Hannifin (1987) examined ethnic differences in alcohol use in Hawaai. They found significant ethnic group differences, suggesting that the learning background of the individual is determined by the culture in which an individual is raised, not necessarily the culture of residence. The authors conclude that cultural norms are important determinants of the level of alcohol use and probably the risk of alcoholism.

Theories of addiction

Emphasis on cognitive factors in alcohol related behaviour varies according to the approach taken to explain drinking behaviours. These approaches are conceptualised within an addiction framework by Brickman (1982), who suggests four basic approaches to addiction.

The first approach to addiction Brickman describes is the moral model, where the individual is held responsible for both acquiring and solving the problem and the addict is someone who lacks the moral fibre to resist temptation. This model has limited support as the concepts on which it is based are outdated.

The second approach described by Brickman is the enlightenment model, where the individual is responsible for the development of the problem but is incapable of changing without the help of a higher power or collective entity such as Alcoholics Anonymous.

The third model developed as a response to the victim blaming approach of the first two models and has become known as the medical/disease model. Here the victim is not held responsible for acquiring or solving the problem, but are told that they are suffering from a disease similar to other biological disorders. Problems with alcohol are seen as being based on an underlying physical dependency which is usually thought to be rooted in internal body chemistry (such as predisposing genetic influences). The disease process is thought to be latent even before an individual has a first drink, and it remains even through periods of abstinence. By stating that the individual has a disease which symptoms are beyond their control we create the expectation that the individual cannot control their behaviour.

The fourth model suggested by Brickman is the compensatory model. In this model the individual is not thought to be responsible for the acquisition of the addictive behaviour but is capable of compensating for the addiction by taking an active responsible role in the change process. Individuals are thought to be active agents in, not victims of their addictions (Peele, 1989). A key point in this approach is that addictions are multi determined. Biological factors may increase an individuals risk of developing a dependency in the context of environmental factors. Learning factors such as classical and operant conditioning , observational and social

learning and higher order cognitive processes such as beliefs expectancies and attributions are common to all addictive processes. Rather than polarising behaviours (loss of control or total abstinence, under this model addictive behaviours are assumed to lie along a continuum of use. All points along the continuum are assumed to be governed by similar processes of learning. Although the habit has been shaped by past learning experiences the process of changing habits does involve the active participation and responsibility of the person involved. It is this model into which Expectancy Theory and it's implications fit.

Expectancy Research- A literature review

Balanced placebo studies

During the last two decades researchers have investigated the role of expectancies in determining behaviour while drinking by manipulating subjects beliefs about what they were given to drink independently of the actual administration of alcohol. These balanced placebo designs factorially cross two alcohol expectancy conditions with two alcohol content conditions. There are two true conditions in which the subjects get what they expect, whether it is an alcoholic drink or not, and two deception conditions, in which the subjects get the opposite of what they expect.

The results of balanced placebo studies have shown that expectancies are often as potent as the actual pharmacological effects of alcohol in determining behavioural consequences. For example, Lang, Goeckner, Adesso, and Marlatt (1976) investigated the role expectations of alcohol's

effects may have on aggression using a sample of heavy social drinkers. The subject group was divided into two groups, one of which was told by the researchers they would receive vodka and tonic while the other was told they would receive only tonic. In fact half the subjects in each group received vodka and tonic and the other half only tonic. Subjects were then assigned to a provocation situation with an insulting partner or had an amiable partner, again on a 50:50 basis within each of the four alcohol or placebo groups. Partners then became "learners in a word association experiment in which subjects had an opportunity to be "teachers" to shock the former partner. Conversations between the two were recorded and rated for verbal aggressiveness. The results showed that those told they would receive alcohol believed they had received alcohol although actual alcohol recipients were reported to have drunk ore. Even so, expectations accounted for half the variance of all main effects. Lang et al however failed to investigate the possibility that higher doses of alcohol may directly produce aggression (Goldman, Brown & Christiansen 1987).

Research involving manipulation of beliefs about whether or not alcohol has been consumed has involved a variety of emotions and behaviours. Goldman, Brown and Christiansen found men and women experience an increase in sexual arousal if they believed they had been drinking alcohol. They also found that a decrease in anxiety in an interpersonally stressful situation occurs when alcohol is thought to have been consumed for males, while females reported an increase in anxiety in a similar situation. Goldman, Brown, and Christiansen (1987) found alcohol dependent

individuals consumed larger amounts of drinks and reported more craving for alcohol when they believed they were drinking alcohol.

The use of a double blind strategy in these in which neither the experimenter nor the subjects know which drinks contain alcohol and which do not ensures no experimenter bias. However, this is difficult where the preparation of drinks immediately prior to consumption is preferable. Furthermore if the interceptive cues associated with alcohol consumption are absent or incomplete the placebo condition may be rendered ineffective especially if subjects are informed that they may receive alcohol, as may be required ethically (Goldman & Christiansen, 1987).

Although balanced placebo studies provide encouraging support for the expectancy's effects , the evidence is indirect. Typically, balanced placebo researchers investigated the effect of a general unstated alcohol expectancy on a single behavioural outcome. It may therefore be possible to interpret the behavioural outcomes of these balanced placebo studies in ways other than using the expectancy concept for example, classical conditioning (Goldman et al, 1987)

Questionnaire studies

To provide more direct evidence for expectancy effects on alcohol related behaviour, recent research has concentrated on specific expectancy factors and drinking behaviours. Questionnaires requiring self reports of real life behaviours and specific expectancy responses allow a progression from

experimental to survey type research. The validity of self reports of alcohol related behaviour has been established by a variety of researchers. (Oei & Jones, 1986; Sobell & Sobell, 1978). This method is proposed for the present study as it provides a valid method for measuring specific expectancies in relation to specific drinking related behaviours.

Previous research using questionnaires has examined patterns of specific expectancies and found them to be indicative of various categories of drinkers. This type of study demonstrates the predictive power of expectancies and forms the base of a large body of research. Studies using alcohol expectancy questionnaires have found expectancies to discriminate between heavy and light drinkers. For example, Brown (1980) examined the alcohol expectancies of a large heterogeneous population, and found lighter drinkers reported a range of positive expectancies, while heavier drinkers concentrated on fewer, but stronger expectancies. Much research has shown that heavier drinkers tend to perceive the behavioural consequences of drinking less negatively than do lighter ones and non drinkers (Leigh, 1987; McCarty Morrison & Mills, 1983) Heavy drinkers also have stronger expectations of positive outcomes than lighter drinkers (Critchlow, 1987; McCarthy, Morrison, & Mills 1983). Rosenow (1983) investigated differences in specific expectancies between light, moderate and heavy drinkers. He found that moderate and heavy drinkers expect more physical and social pleasure, sexual enjoyment, aggressiveness, expressiveness and relaxation after drinking than light drinkers but did not differ in expected levels of cognitive motor impairment or irresponsibility and carelessness. Similarly,

Jackson and Matthews (1988) found high alcohol consumption to be correlated with high expected social dominance among British undergraduates.

Expectancies appear to have a role in problem drinking as they have been found to discriminate between problem and non problem drinkers (Brown, 1985; Christiansen & Goldman, 1983; Thombs 1993) Thombs (1993) tested the discriminating qualities of alcohol related expectancies by administering an alcohol expectancy questionnaire and The Michigan Alcoholism Screening Test to college students. He found drinkers differed in their alcohol expectations according to whether they were problem drinkers or non problem drinkers.

Much of the research described above has identified certain expectancies as stronger risk factors for heavy and problem drinking than others. For example, among adolescents, Christiansen and Goldman (1983) found those who drank in a frequent, social manner expected alcohol to enhance their social behaviour, whereas those who reported alcohol related problems expected an improvement in their cognitive and motor functioning. In a later study, Christiansen et al (1985) found that expectations of improved cognitive and motor functioning from drinking may lead to the development of drinking problems. among adolescents. Specific expectancies related to problem and heavy drinking have varied from study to study according to the population, expectations and drinking behaviours under investigation.

Studies which have investigated expectancy strength have found those with stronger expectancies are more likely to be problem drinkers and alcoholics. Brown, Goldman & Christiansen (1985) conducted a study on an alcoholic population which revealed alcoholics have stronger expectancies of positive outcomes than non alcoholics. Similarly, Brown and Creamer (1985) found adolescent alcohol abusers expect more positive outcomes than non-abusers.

The predictive power (concurrent validity) of expectancies appears to be extremely resilient (Goldman et al, 1987). Expectancies measured using a variety of questionnaire formats have proved predictive of drinking behaviour. The predictive power of expectancies has held for scales developed to measure expectancies, (Goldman, Inn, & Anderson, 1980) as well as scales which include expectancy like items (McCarty, Morrison, & Mills 1983; Rosenhow 1983).

Group differences in expectations indicate the discriminate nature of expectancies and provides impetus for research not only into the nature of alcohol expectancies, but also their role in explaining other, widespread differences within populations (Goldman et al 1987).

Unfortunately generalisation across these studies of research is difficult. This is primarily due to a general inconsistency in defining heavy and problem drinkers (Oei & Jones, 1987). Caution is also required when comparing studies where different methods are used to measure similarly defined concepts (Webb, 1990). An additional problem which limits

generalisation across studies is that the terms problem drinking, alcoholism and heavy drinking often appear to be used interchangeably within the literature, although the concepts are not necessarily interrelated. A final factor making the literature to date difficult to compare is that subjects are drawn from very specific, widely varying populations. These predominantly involve groups with unusual drinking patterns such as college students and alcoholics. A literature search revealed no research using a cross section of drinkers from the general population.

Sex Differences in Expectancy Research

Significant sex differences in both drinking behaviour and expectancies appear throughout the literature. Physical differences in alcohol processing account for some of the differences. For example, females are likely to experience more severe physical effects resulting from the consumption of alcohol. However, social factors also appear to be important in this regard. Women are subject to greater social sanctions than men regarding alcohol. Consistent with this, Rosenow (1983) found women to expect less pleasure and relaxation from consuming alcohol, and more motor and cognitive impairment.

Differences in specific expectancies appear frequently in the literature. Brown, Goldman, Inn, and Anderson (1980) found women were more likely to expect global positive effects after drinking where men expected more power and aggression. Gustafson (1991) found men expected more sexual enhancement than women. Men also rated both sexual

enhancement , physical and social pleasure , and social assertiveness as more desirable effects than did women.

Males and females appear to differ regarding expectancies which predict various drinking behaviours. Expectancies differ between sexes in relation to frequency of drinking. Mooney, Fromme, Kilahan, & Marlatt (1987) found sex differences in specific predictors of drinking frequency. For example, males who reported most frequent drinking tended to have stronger expectations of increased social and physical pleasure, global positive changes and sexual enhancement. However, the single factor of tension reduction best predicted frequent consumption among females.

George (1987) used questionnaire studies to evaluate the effects of gender on alcohol expectancies. Subjects assessed alcohol expectancies about a male and a female target person. Females expected the target person to feel more stimulation and pleasure as a result of consuming alcohol than did males.. however both groups saw the female target as experiencing less stimulation than the male target person. Results such as these indicate that expectations of the effects of drinking for differ depending on the other's sex.

Thombs (1993) found sex differences in predictors of problem drinking. Arousal and power was found to be the strongest discriminating expectancy for problem drinking in women, whereas for men it was physical and social pleasure.

Cross-Cultural Research

Identification of specific predictor differences across cultures may lead to a greater understanding of the role that culturally specific factors may play in drinking (Grube 1989). Cross cultural comparisons highlight unique cultural patterns which may be emphasised in the development of treatment programs for alcohol related problems. Identification of specific expectancies within a culture may provide a basis for prevention and intervention strategies involving modification of cognition.

Cross cultural research to date has concentrated on comparing cultures which have traditionally extreme alcohol histories and drinking patterns. For example, McAnulty, McGuire, Minder, & McAnulty (1989) compared attitudes toward alcohol among French and United States college students, the French described as having 'over permissive' attitudes towards alcohol and Americans as having 'ambivalent' attitudes. They found cultural differences in the function alcohol serves for the two populations. American college students appeared to use alcohol primarily as a recreational drug, while aware of the serious aspects of alcohol. Conversely, the French in the sample consumed alcohol in a wider variety of situations, and considered it less potentially dangerous. The relationship between attitudes and drinking patterns was not directly assessed, however, because of the absence of an alcohol use scale.

Teahan (1987) compared Irish and American college students alcohol expectancies, values, and their relationship to amount and severity of

drinking. Ireland was chosen because of its unique patterns of alcohol use/abuse that is, as a nation it appears to contain a higher rate of alcoholic as well as non-drinkers than other nations, while having comparable overall consumption of alcoholic beverages. 153 white Irish and 143 white American college students were asked to rank order 13 positive and twelve negative expectations of the effect of alcohol according to their importance when alcohol was consumed. The relationship between these, values and two drinking scores were calculated. Irish and American were found to differ on specific significant differences in the expected positive and negative consequences of drinking suggest that theses may reflect important aspects of the culture in which the drinking took place. For example, Americans tended to worry more about getting into trouble with authorities over their drinking, which Teahan suggests could be a result of the greater acceptance of drunken behaviour among the Irish, as well as the element of humour with which Irish historically view drunkenness.

Analysis of positive expectations revealed Irish expected alcohol to provide a more positive self-image and to stimulate creativity. Irish females expected alcohol to ease inhibitions and enhance sociability. American females expected alcohol to provide entertainment and relaxation, as well having a pleasant taste. In contrast, American males tended to drink for enhanced sexual performance. Examining negative expectations it was found American subjects expect alcohol to reduce sexual performance, while American women are concerned about short-term physical consequences such as hangovers. All Irish tended to worry about the

expense of drinking, while Irish females worried about increased aggression as a consequence of drinking. In terms of amount of drinking and problem behaviours as a result of drinking, Irish females were significantly lower than the Americans. There were no significant differences between males on these measures. The groups also differed in the specific expectancies that predicted problems with drinking and amount drunk.

Comparing institutionalised alcoholics in Canada and Ireland, Teahan (1988) found differences in specific expectancies between the groups. Irish tended to drink for social reasons, striving for tranquillisation, detachment and self-absorption. their greatest concern was that tranquillisation would fail, and they also feared the physical consequences of drinking. Canadians drank for social/sexual enhancement and worried mostly about trouble with authorities and getting into debt.

In addition to International Cross cultural studies, research has revealed differences in alcohol expectancies among different races within a dominant culture. Using a clinical alcoholic population, Kline (1990) compared alcohol related expectancies of black and white American men and women. Although relatively few race and sex differences were found, significant differences were revealed for the specific expectancies that alcohol enhances sexuality and induces relaxation.

Cross cultural comparisons of expectancies provide support for the usefulness of the expectancy concept in explaining some drinking

behaviours. The primary limitation in this body of literature is that research has concentrated on groups with extreme drinking behaviours (College students and alcoholics) which may be more similar in terms of drinking patterns to each other than to the populations from which they came. Furthermore, research has concentrated on white, English speaking cultures. A literature search reveals no investigations into the alcohol related cognitions of a colonised sub culture such as the Maori people.

Implications of Expectancy Research

Implications for treatment.

The identification of specific alcohol expectancies for each sex and race could provide counsellors with a framework for tailoring different intervention strategies. For example, social skills training for those who expect alcohol to improve their ability to function in social situations (Thombs 1993). Grube suggests education may counteract expectancy beliefs, once identified.

Analysis of individual expectations may reveal areas where an individual differs from the norm. Of particular significance are those expectancies that link to heavy or problem drinking patterns. Treatment philosophies that include modification of perceptions of the controllability of drinking behaviour such as Relapse prevention strategies tend to be supported by expectancy research (Mariano, Donovan, Walker, & Mariano, 1989).

Cognitive behavioural treatments require an analysis of the cognitive, social and behavioural factors involved in the in the drinking behaviour of a problem drinker. Emrick and Aarons (1990) describe several formal assessment instruments which may be used by cognitive behaviourist therapists to identify specific alcohol expectancies. These include the Alcohol Use Inventory (AUI) (Wanberg, Horn, & Foster 1977), The Comprehensive Drinker Profile (Miller & Marlatt, 1984), and the Alcohol Expectancy Questionnaire (AEQ) (Brown, Christiansen, & Goldman 1987). Data obtained from these and other similar questionnaires can help the therapist develop a treatment plan. For example, an individual who has strong expectancies of the enhancement of social functioning with alcohol may subsequently be treated by methods involving the reduction of social anxiety.

The importancee of a cognitive variables in determining drinking behaviour has implications for the medical or disease model of alcoholism. Although the existence of specific physiological effects on the individual as a result of drinking are accepted, Expectancy Theory implies that control of drinking behaviour lies to a large extent in individual cognition rather than a generalised drug effect. The shift in emphasis from the external cause of alcohol related problems (alcohol) to an internal one (cognition) potentially gives the individual more control over drinking behaviours. The expectancy concept allows for infinite variations in drinking behaviours as individuals perceptions differ. However, similarities between members of groups may be expected to occur as a result of common

background experiences. The traditional disease model minimises the importance of individual control over alcohol problems by emphasising the effects of alcohol over which the subject has the least control, the actions of the drug. Stanton Peele, in "The Diseasing of America," suggests that acceptance of the approach of traditional medicine and the disease model may be dangerously complacent, and reveals the ineffectiveness of treatment programs most commonly used for the "disease" of alcoholism. Cultural differences in drinking behaviours as detailed by McAndrew and Eagerton and later empirical cross-cultural studies provide indirect support for the validity of Peele's claims.

Adoption of treatment strategies that emphasise individual control and identify motivations for drinking may be more effective for the Maori population than traditional treatment methods that rely on the disease model of alcoholism. The former treatment strategies may identify culturally specific motivations for drinking and incorporate these in treatment programs. At present there is very little which provides culturally relevant inpatient, outpatient or preventative services for the Maori people (Johnson and Hannifin 1987).

The Present research

The questions addressed by the present research are intended to add to the research described above in two areas. To address issues concerning the generalisability of previous findings regarding alcohol expectancies, the link

between expectancies and drinking behaviour is examined for a New-Zealand population. The relationship is expected to follow the pattern of previous research that individuals with stronger expectancies will also be heavier drinkers, experience more problems as a result of drinking alcohol, and experience drunkenness more frequently than individuals with weaker expectancies.

To overcome the problems with clarity of operational definitions of drinking behaviours present in previous expectancy research the present research includes separately defined measures of amount consumed, problems with alcohol, and frequency of drunkenness. Analyses of these measures are then conducted independently.

If a link between expectancies and drinking behaviours is found it may provide some support for attention to cognitive factors, specifically expectancies, in analyses and possibly treatment of problem drinking in New-Zealand. On a more general level, if construct validity of Expectancy Theory is demonstrated in this investigation, the generalisability of the concept is strengthened and subsequent potential application of the concept is expanded.

The second objective of this thesis is to extend the area of inquiry to groups that have not been previously examined by investigate race and sex differences in expectancies. Based on previous research it is expected that there will be differences between cultures and sexes regarding the type and strength of alcohol expectancies . To avoid the problem of focusing on an

section of society with atypical drinking patterns, the present sample were selected to be as representative as possible of the 20-30 year age group in New-Zealand.

Comparisons between Maori and Pakeha in the present research are seen to be important because of apparent differences between Maori and Pakeha drinking patterns and histories with alcohol. Furthermore, a comparison between these groups may help to clarify the role of culture-specific cognitive processes in drinking patterns. However, the researcher is committed to ensuring the findings are available to the Maori people and has endeavoured to ensure that the nature of the research is such that the results may be useful to the Maori people.

Method

Sample characteristics

Subjects were 46 Maori and 43 Pakeha living in the Canterbury region. Thirty eight were male, and 51 were female. These included 21 Pakeha males, 22 Pakeha females, 17 Maori males and 29 Maori females, a total of 89 subjects. They were aged between 20-30 years.

Demographic and drinking background

To obtain a sample which was representative of this age group in the Canterbury population, subjects were drawn from several groups; Canterbury University students (32%), Christchurch Polytechnic students (9%) Members of the University of Canterbury Maori club, including non-students (23%), and members of the public visiting a shopping mall in Christchurch (36%). All groups contained both Maori and Pakeha subjects.

Recently there has been a trend in cross cultural research in New Zealand to use self categorisation as a standard definition of race (Sachdev, 1990). In line with this, a single question was asked of respondents as to the race to which they belong.

Subjects participated on a voluntary basis, and were assured of the confidentiality of their responses. The sample of university and polytechnic students were part of first year psychology and Maori courses. The researcher approached possible subjects who appeared to be in the age range in a shopping mall and asked whether they would be willing to participate in a psychological survey.

Materials

Subjects completed three questionnaires; A Drinking Background Questionnaire, a Drinking Behaviour Questionnaire and an Alcohol Expectancy Questionnaire. To ensure confidentiality no names or addresses were collected. All scales were checked for cultural appropriateness by Maori elder Paul Tau, from the Department of Social Work, Canterbury University and were deemed suitable for administration to Maori subjects. A pilot time trial was conducted in which ten subjects were timed as they filled out the three forms beginning with the Drinking Background Questionnaire and ending with the Drinking behaviour Questionnaire. Subjects completed all Questionnaires in an average of eight minutes and forty three seconds. No names or any other details which may reveal the identity of the subjects were recorded. This was felt to be an important aspect of the research from an ethical view point because personal alcohol use is a sensitive subject. Furthermore research has revealed consent to participate in such a study is more likely if anonymity is assured. Responses may also be less affected by social desirability effects when it is clear

responses will be anonymous, resulting in greater reliability of results (Werch, 1990).

Drinking Background Questionnaire

The drinking background questionnaire included demographic information intended to detect specific cultural differences of interest in this study. It comprised 18 items including demographics and items assessing drinking background such the age at which subjects began drinking, and whether or not their parents drink/drunk. For the purposes of coding, the response categories of these items are given a numerical equivalent for example, 1 for male and two for female.

Drunkenness.

Drunkenness was measured on the single question 'Of the times that you drink, how often do you get drunk?' possible scores were never (1), monthly or less (2), 2-4 times a month (3), 2-3 times a week (4), and four or more times a week (5). Question 11 of this questionnaire investigated the frequency of drunkenness and was used as a measure of drinking behaviour.

The format of this question was multi-choice. The response choices were never (1), monthly or less (2), 2-4 times a month (3), 2-3 times a week (4), or 4 or more times a week (5).

Scoring.

Three levels of drunkenness were created from the five levels in the question. Subjects were classified according to a median split. Subjects who scored above the median of two were classified as frequently drunk and those below the median as never drunk. Subjects who selected the median score were classified as moderately frequently drunk.

Drinking Behaviour Questionnaire

The Drinking Behaviour Questionnaire consisted of two parts; a twenty item self report questionnaire and a seven day retrospective drinking diary. Self reports of drinking behaviour are frequently used by alcohol researchers as they are inexpensive, simple to administer and acceptable to respondents (Webb 1990). Various researchers have found them to be reliable and valid (Brown 1980, Polich 1982, Sobell and Sobell 1978).

The twenty items in the first section of the drinking behaviour questionnaire were taken from the Self administered Canterbury Alcoholism Screening Test (SCAST), an instrument devised to detect possible drinking problems. The decision to use the items from the SCAST to measure problems with drinking was primarily because standard screening methods such as the Michigan Alcoholism Screening Test and the CAGE were devised and validated primarily using white male populations, and it was considered that these contained some items with limited relevance to non-whites or women.

Because the SCAST was constructed using a New-Zealand population (Elvy, 1985), the items were considered to be more relevant to the subjects in this study than items in alternative screening methods. As stated previously the SCAST items used in this study had excellent internal reliability, confirming their utility for the present sample. The twenty self-referent questions drawn from the SCAST are indicative of problem drinking and refer to problems with alcohol encountered by the respondents. Instructions printed on the questionnaire ask the subjects to circle the answer which is most true for them. A five point likert scale (with end points strongly disagree and strongly agree) replaced the original yes/no format of the SCAST. Likert scales have been found to be efficient and reliable scales for the measurement of attitudes and behaviour (Dane, 1990). In this case the likert scale was chosen to increase the sensitivity of the instrument, and to allow for the measurement of the severity or strength of individual problems for group comparisons on this level. This scale had an alpha co-efficient of 0.85, providing sufficient reliability.

Scoring.

For the purposes of data analysis subjects were assigned a raw score which ranged from 20 to 100. They were also assigned categories according to the median of 36 those below classified as non-problem drinkers and those above as problem drinkers. Possible scores for the drinking behaviour questionnaire ranged from 20- 100.

The Drinking Diary

The second section of the drinking behaviour questionnaire consisted of a drinking diary to record drinking behaviour for the week previous to testing. As stated previously, validity and reliability of self reported drinking behaviour have been demonstrated (Brown 1980, Polich 1982, Sobell & Sobell 1978).

There are several advantages of the drinking diary format over other quantity measures format. The first of these is that the format is easy for respondents to understand. A second advantage of drinking diaries is that they report actual consumption rather than requiring subjects to estimate average amounts of alcohol consumed. Finally, drinking diaries allow flexibility in data analysis, providing a uni-dimensional, continuous variable (Webb 1990). Webb (1990) found drinking diaries to be relatively robust, with high levels of test-re-test reliability. Webb also found alcohol consumption measured by drinking diaries exhibited a high degree of stability.

Subjects noted the time of day (morning, afternoon or evening) they had consumed a drink containing alcohol. They also recorded the type of beverage and the amount they had consumed for each day of the week. The seven day format was chosen because it was considered that a longer time period may decrease reliability, as it may be difficult for respondents to remember further back than a week. Diaries were recorded retrospectively because subject anonymity may have been threatened if the researcher had a

record of names and contact phone numbers to follow up diaries recorded as drinking occurred. It was also considered that it may be unlikely for respondents to fill in the diary during a drinking situation or straight afterwards. A further advantage of the retrospective format is that the burden on the respondent is not as great as it would be with diaries recorded as drinking occurred. Drinking diaries recorded all alcoholic beverages consumed over the previous seven days. To aid recall, the seven days on the diary were divided into morning, afternoon and evening with spaces to recall all alcoholic beverages consumed at these times.

Scoring.

Alcoholic drinks were converted by the researcher to grams of alcohol per week. Scores on this scale ranged from 0 to 731 for subjects in this study. As with the drinking behaviour questionnaire, for the purposes of statistical analysis subjects were also given a category according to the median. In this case the median was and those above this were classified as heavy drinkers and those below as light drinkers.

Alcohol Expectancy Questionnaire.

This instrument is based on one developed by Teahan and Kline (1986) and applied by Teahan (1986,1988) and has been found to successfully discriminate between the alcohol expectancies of different cultural groups. Ranked scores in the original questionnaire have been replaced for the purposes of this research by a seven point likert scale to permit individual items to be recorded as equally important to the individual. This was not

possible with a ranked format. The likert scale also allows more choice of response for each item.

This instrument was chosen above the more conventional Alcohol Expectancy Questionnaire (AEQ) for several reasons. As noted by Kline (1990) the sub-scales of the AEQ all have less than ten items, which may limit their sensitivity. The response format of the AEQ was also considered to be a limitation. Expectancy scale items are in a true/false format, which does not allow for the subjects who attribute a behavioural effect to differ in levels of strength of the effect. A further problem with the AEQ is that items on the AEQ differ according to the referent person. For example, some items are self referent (For example, 'alcohol makes me worry less') while others concern people in general (for example, 'men are friendlier when they drink'). This may lead to inaccurate or confused responses as Rosenhow (1983) found college students to expect a alcohol to effect others more than it effects themselves. These problems are overcome in the instrument developed by Teahan and Kline which this study utilises.

Instructions were printed on the questionnaire and are based on those used by Teahan (1986). Thirteen positive expectancies and twelve negative were rated by subjects on the seven point scale. For example, this first positive expectancy is labelled 'competence and power' and is followed by a short explanation of it's meaning, that is, 'feel more powerful and competent; feel more adult and mature; able to control events'. The likert scale consisted of seven points indicating the importance of the expectancy when making a

decision about drinking. End points of the likert scale were 'Not important at all' (1) to 'extremely important' (7).

Scoring.

Possible scores for the positive alcohol expectancy were from 13 to 91. For the negative expectancy scale scores ranged from 12 to 84.

Procedure

Because the sample was intended to be representative of the general population in this age range, subjects were gathered using a variety of methods. An attempt was made to acquire both Maori and Pakeha subjects from each source to ensure comparability. In all cases, the procedure subsequent to subjects agreement to participate was identical. In the cases where the researcher was unable to personally distribute the questionnaires, the lecturer and tutor were instructed as to the procedure to follow when administering the questionnaires. The initial approach to potential subjects differed for each group. Subjects obtained through the Maori Club at the University of Canterbury were approached by the researcher at a Maori Club meeting held in the student union building at the University of Canterbury. The second group of subjects, those visiting a shopping mall in Christchurch were approached individually by the researcher. If they consented to taking part in a psychological survey, as requested by the researcher, the procedure described above was followed. Students participating in a first year psychology class were asked to participate by their

laboratory tutor. Polytechnic students were administered the questionnaires by a lecturer conducting a Maori language course.

The procedure began with a brief description of the research. Subjects were then informed that it would take about ten minutes to complete all questionnaires. Subjects were also informed that their answers were entirely anonymous, and that no names or details that may reveal their identity were requested on the questionnaires. Finally, it was stressed that participation was voluntary, and in the case of polytechnic and university students, subjects were assured that participation was not part of their course requirement and would not be assessed as such. Those who chose to participate were asked to fill out the questionnaires individually, then hand them back to the researcher, tutor or lecturer.

Results

Results were analysed using Statview (Abacus concepts, 1986) and SPSS (SPSS Inc, 1983) Preliminary data analysis consisted of testing the internal reliability of the drinking behaviour questionnaire and the alcohol expectancy questionnaire using Cronbach's alpha. Both scales proved to be reliable: 0.82 and 0.84 respectively.

Sample Characteristics

The original sample numbered 99. Ten were excluded from the data analysis because they reported total abstinence from alcohol. Subjects excluded were seven Maori females, two Pakeha female and one Maori male.

The sample were aged between 20 and 30 years, with a mean age of 23.97. This age range was selected because drinking patterns climax and stabilise in this period (Casswell et al 1991). Further, Problem drinking and abstinence levels are at their peak during this period. Before the age of twenty drinking patterns are relatively erratic and after the age of thirty consumption levels and alcohol related problems begin to decline (Casswell et al 1991).

Analyses of background drinking revealed 94% of the sample reported no drinking problems. 89% of the sample had or have parents that drink or drunk, and 30% of the sample reported have or had parents with drinking problems. 59% of the sample drank alcohol at least 2-3 times a week, and 41% felt drunk monthly or more.

Expectancies and Drinking Behaviour

Alcohol Expectancy Questionnaire

As stated previously, the alcohol expectancy questionnaire was divided into two scales; a positive expectancy scale and a negative expectancy scale. Analysis of the positive expectancy scale revealed that the mean score for all subjects was 40, with a high score of 83 and a low score of 20 (range 63). Subjects recorded a mean score of 40.8, with a high score of 78 and low score of 13 (range 78). For the negative expectancy scale possible scores ranged from 12-84. For this scale the mean score for all subjects was 37.9 with a high score of 73 and a low score of 12 (range 73).

Drinking Behaviour Questionnaire

Data from the Drinking Behaviour Questionnaire were divided into two groups according to a median split (36). For the purposes of this study subjects who scored above the median were categorised as problem drinkers and subjects who scored below the median as non- problem drinkers.

A two factor ANOVA was performed to compare total expectancy scores for problem and non-problem drinkers. Means for the groups are presented in Table One.

Problem drinkers held significantly stronger total expectancies for the positive expectancy scale, $F(1, 88) = 13.21$, $p < .001$, but not for the negative expectancy scale $F(1,88) = 2.0$, p = n.s.

Item by item analyses using a series of t tests revealed specific expectancies for which problem and non-problem drinkers differed. Problem drinkers held the following expectancies to be significantly more important when making a decision about drinking than did non-problem drinkers: competence and power $t(87) = -2.6$, $p < .05$, detachment from the world $t(87) = -4.12$, $p \leq .0001$, ease of inhibitions $t(87) = -4.4$, $p \leq .0001$, positive self image $t(87) = -2.2$, $p < .05$, relaxation $t(87) = -2.4$, $p < .05$, Sexual enhancement $t(87) = -2.3$, $p < .05$, and social cohesiveness, $t(87) = -2.14$, $p < .05$.

On the negative expectancy scale, problem drinkers rated expense $t(87) = -2.18$, $p < .05$, long term physical consequences $t(87) = -2.1$, $p < .05$ and short term physical consequences $t(87) = -3.8$, $p < .001$ as significantly more important than did non-problem drinkers when making a decision about drinking.

The Drinking Diary

There was a relatively low response rate to this section of the questionnaire, possibly because of it's placement at the end of the third questionnaire when

subjects were losing concentration. Inability to remember drinking occasions may also have contributed to the low response rate. In a small number of cases the diaries were filled in incorrectly, and were excluded because of this. For the 62 subjects who remained results were converted from continuous (grams of alcohol per week) to categorical data by splitting the group into two according to a median split (100 grams alcohol per week). For the purposes of this study subjects in category one (below the median) were assigned to a lighter drinking group, and those in category two or above the median were assigned to a heavier drinking group.

To compare expectancy totals for heavier and lighter drinkers, a two factor ANOVA was performed for total scores for positive and negative expectancies. The mean scores appear in Table One. Heavier drinkers scored significantly higher than lighter drinkers for positive expectancy total scores $F(1,62) = 16.2$, $p < .001$, but not for negative expectancies $F(1,62) = 3.9$, p = n.s.

An item by item analysis using a series of t-tests revealed heavier drinkers had significantly higher mean scores for nine of the twelve positive expectancies. These included competence and power $t(87) = -3.53$, $p < .001$, creativity $t(87) = -3.9$, $p < .001$, detachment from the world $t(87) = -2.19$, $p < .05$ ease of inhibitions $t(87) = -3.8$, $p < .001$. Heavier drinkers also scored significantly higher for enhance sociability $t(87) = -3.8$, $p < .001$, entertainment value $t(87) = -2.2$, $p < .05$, and positive self image $t(87) = -3.9$ $p < .001$. Finally, heavier drinkers scored higher for reduce social anxiety $t(87) = -3.9$, $p < .001$ and social cohesiveness $t(87) = -3.3$, $p < .05$. Heavier drinkers

also scored significantly higher for two of the twelve negative expectancies. These were long term physical consequences $t(87) = -2.2$, $p < .05$, and short term physical consequences $t(87) = -3.3$, $p < .05$.

Drunkenness

As previously stated drunkenness was measured on the single question ' Of the times that you drink, how often do you get drunk?' The four categories contained in the original question (never (1), monthly or less (2), 2-4 times a month (3), 2-3 times a week (4) and 4 0r more times a week (5)) were reduced to three. Combining groups three and four enabled the median of two to be used as a centre point. Subjects who selected responses above two (originally selecting categories 3 or 4) were categorised as frequently drunk and subjects who selected responses below 2 (selecting category 1) subjects were categorised as never drunk. Subjects with a score of two were categorised as drunk moderately often. A two factor ANOVA was conducted for drunkenness and positive and negative expectancies. For positive expectancies there were significant differences between the groups $F(2,88) = .84$, $p < .001$). Post hoc Fisher PLSD tests revealed subjects who reported frequent occasions of drunkenness were significantly different from those who reported moderate and infrequent drunkenness, and those who reported moderate occasions of drunkenness were significantly different from those who reported infrequent drunkenness. There was no significant difference between the groups for negative expectancies $F(2,88) = .038$, $p =$ n.s.

Infrequent drinkers, moderately frequent drinkers and frequent drinkers were compared for each item on the expectancy scales. One factor ANOVAs revealed differences for eight of the twelve expectancies between infrequent drinkers, moderately frequent drinkers and frequent drinkers. There were significant group differences for competence and power $F(1,88) = 7.3$, $p < .05$. Fishers PLSD test revealed the frequently drunk group rated this expectancy as significantly more important when making a decision about drinking than the infrequently drunk group and the moderately frequently drunk group. For ease of inhibitions there were significant group differences $F(1,88) = 5.80$, $p < .05$. Fishers PLSD tests revealed the infrequently drunk group rated this expectancy as significantly less important than either the moderately frequently drunk group or the frequently drunk group. There were differences between the groups for mood alteration $F(1,88) = 3.7$. $p < .05$, with Fishers PLSD tests revealing the frequently drunk group rated this expectancy significantly higher than the other two groups. Comparisons between groups for positive self image revealed group differences $F(1,88) = 7.9$, $p < .001$, and subsequent Fishers PLSD tests revealed the frequently drunk group to score significantly higher for this expectancy than the moderately frequently or infrequently drunk groups. For reduce social anxiety group comparisons revealed significant differences. Fishers PLSD tests revealed the frequently drunk group rated this expectancy as significantly more important when making a decision about drinking than either the infrequently drunk group and the moderately frequently drunk group. Comparisons between the groups revealed differences for relaxation $F(1,88) = 6.0$, $p < .05$. Fishers PLSD tests revealed between the infrequently

drunk group rated this expectancy as significantly less important than the other two groups. For expectancy eleven (sexual enhancement) differences were found between the groups $F(1,88) = 4.73$, $p < .05$, with Fishers PLSD tests revealing the frequently drunk group scored higher on this expectancy than the other two groups. For social cohesiveness there were differences between the groups, with Fishers PLSD tests revealing the frequently drunk group rated this expectancy significantly higher than the other two groups. Two of the twelve negative expectancies revealed significant differences between groups. These were short term physical consequences $F(1,88) = 44.8$ $p < .05$. Fishers PLSD tests revealed the infrequently drunk group rated this expectancy as significantly less important than did the other two groups. Group differences were revealed for sexual difficulties $F(1,88) = 3.3$, $p < .05$, with Fishers PLSD tests revealing between moderately frequent rated this expectancy as significantly more important than it was rated by frequent drinkers.

Table 1

Drinker type by Expectancies

Drinker type	Positive Expectancies Mean (sd)	Negative Expectancies Mean (sd)
Non-Problem	40. 0 (14.0)	40.1 (15.7)
Problem	50.4 * (11.8)	44.2 (12.4)
Light	41.3 (13.4)	38.4 (12.7)
Heavy	54.12*(11.8)	43.8 (12.3)
Infrequently Drunk	35.2 (11.7)	42.6 (15.2)
Moderately Frequently Drunk	43.5* (11.2)	42.5 (14.8)
Frequently Drunk	50.8* (14.8)	41.7 (13.6)

* = significant to the .05 level

Race and Expectancies

Expectancy strength

Total scores on the Positive and Negative Expectancy scales were compared for Maori and Pakeha using two factor ANOVAS with race and sex the independent variables. Negative expectancies were significantly higher for

Pakeha subjects than for Maori subjects $F(1,85) = 8.5$, $p < .05$. There was no difference between Maori and Pakeha on the positive expectancy scale $F(1,85) = 0.5$, p = n.s). Means for these groups are presented in table two.

An item by item analysis using a series of t-tests revealed specific expectancies in which Maori and Pakeha and male and female differed. On the positive expectancy scale, Maori held stronger expectations of competence and power $t(87) = -2.67$, $p < .05$, and creativity $t(87) = -2.5$, $p < .05$. Conversely, Pakeha rated ease of inhibitions $t(87) = 3.16$, $p < .05$, enhance sociability $t(87) = 2.1$, $p < .05$ and reduce social anxiety $t(87) = 3.08$, $p < .05$ significantly higher than Maori . On the Negative Expectancy Scale, Pakeha considered mental problems when making a decision about drinking significantly more than Maori $t(87) = 3.8$ $p < .001$). Pakeha also considered expense as a factor in making a decision about drinking significantly more than Maori $t(87) = 2.38$, $p < .001$. Loss of judgement was considered by Pakeha to be a more important factor in deciding to drink than Maori considered it $t(87) = 3.0$, $p < .05$. Pakeha also considered the possibility of short term physical consequences $t(87) = 2.2$, $p < .05$ and sexual difficulties resulting from alcohol use more than Maori $t(87) = 2.16$, $p < .05$).

Table 2

Race by Expectancies (Total Scores)

	Maori	Pakeha
	Mean (sd)	Mean (sd)
Positive expectancies	44.6 (12.11)	46.14 (13.8)
Negative expectancies	38.0 (14.9)	*46.6 (14.0)

* Significant to the .05 level

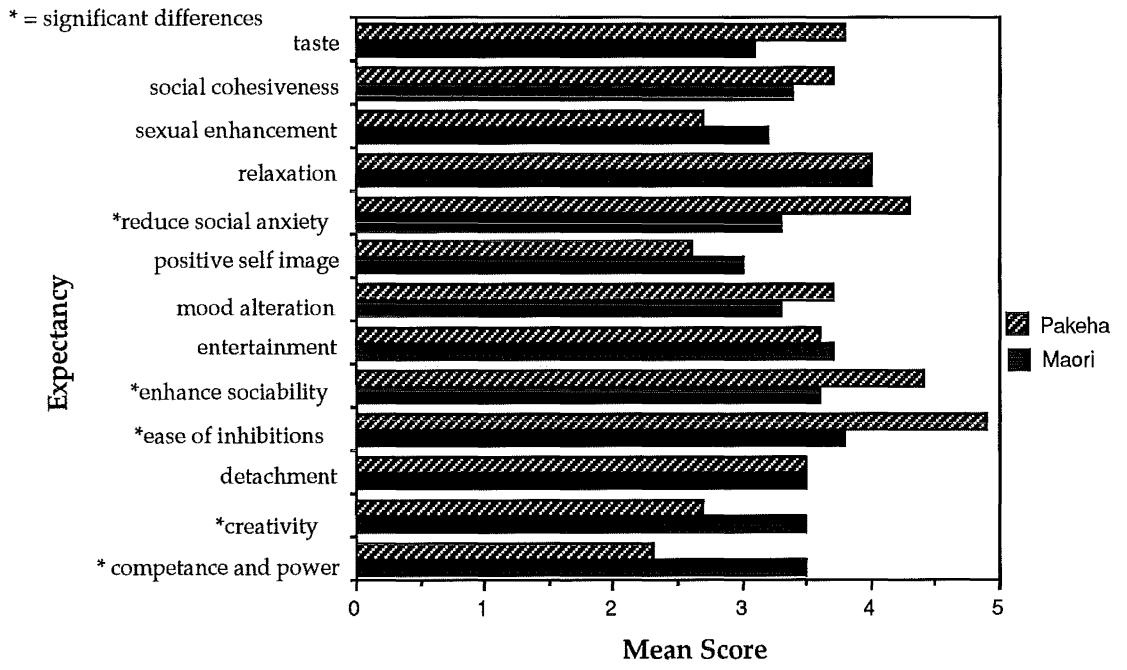

Figure 1: Maori and Pakeha Mean scores
Positive Expectancies

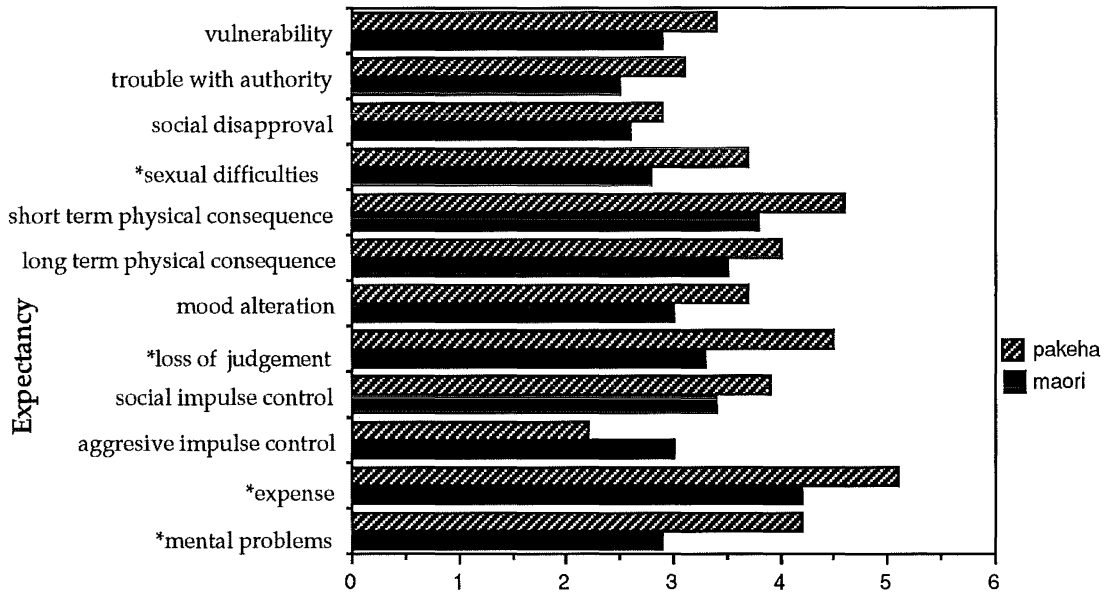

Figure 2: Maori and Pakeha Mean Scores
Negative Expectancies

Race and Drinking Behaviour

Drinking behaviour questionnaire

Maori and pakeha were compared in relation to the drinking behaviour questionnaire total scores using a two factor ANOVA with race and sex the independent variables. No significant differences were found between Maori (M = 41.3) and Pakeha (M = 39.1) for this measure $F(1,85) = .22$ p = n.s .

An item by item analysis using a series of t-tests significant effects for several items in the Drinking Behaviour Questionnaire. Maori scored significantly higher on question 17 'There are times when I'd like to stop drinking' $t(87) = -2.4$, $p < .05$, and question 18 'I'd get along better with my spouse/partner people I am closest to if I didn't drink' $t(87) = -2.7$, $p < .05$.

Drinking Diaries

A two factor ANOVA was performed to compare Maori and Pakeha in relation to amount of alcohol consumed in a week recorded by subjects in drinking diaries again with race and sex the independent variables. No significant differences between Maori (M = 162) and Pakeha (M = 194) were revealed for this measure $F(1,59) = 0.24$, p = n.s

Drunkenness

Chi square analyses were conducted for race and the third drinking measure, drunkenness. revealing no significant differences in the numbers of Maori and Pakeha in the categories infrequently drunk, moderately frequently drunk and frequently drunk $\underline{c^2}(2) = 0.23$ $\underline{p}$ = n.s.

Table 3.

Drunkenness by Race

	Pakeha	**Maori**	Total
Infrequently drunk	6	7	13
Moderately frequently drunk	18	21	39
Frequently Drunk	19	18	37
Total	43	46	89

Sex and Expectancies

Two 2 factor ANOVAs with race and sex the independent variables revealed no sex differences for positive expectancies $\underline{F}(1,85) = 0.29$, $\underline{p}$ = n.s, or for negative expectancies $\underline{F}(1,85) = .1$, $\underline{p}$ = n.s. Means are presented in table four.

Table 4

Sex by Expectancies (Total Scores)

	Positive expectancies	Negative expectancies
	Mean (s d)	Mean (s d)
Male	44.5 (12.12)	41.0 (12.7)
Female	45.9 (15.7)	42.9 (15.3)

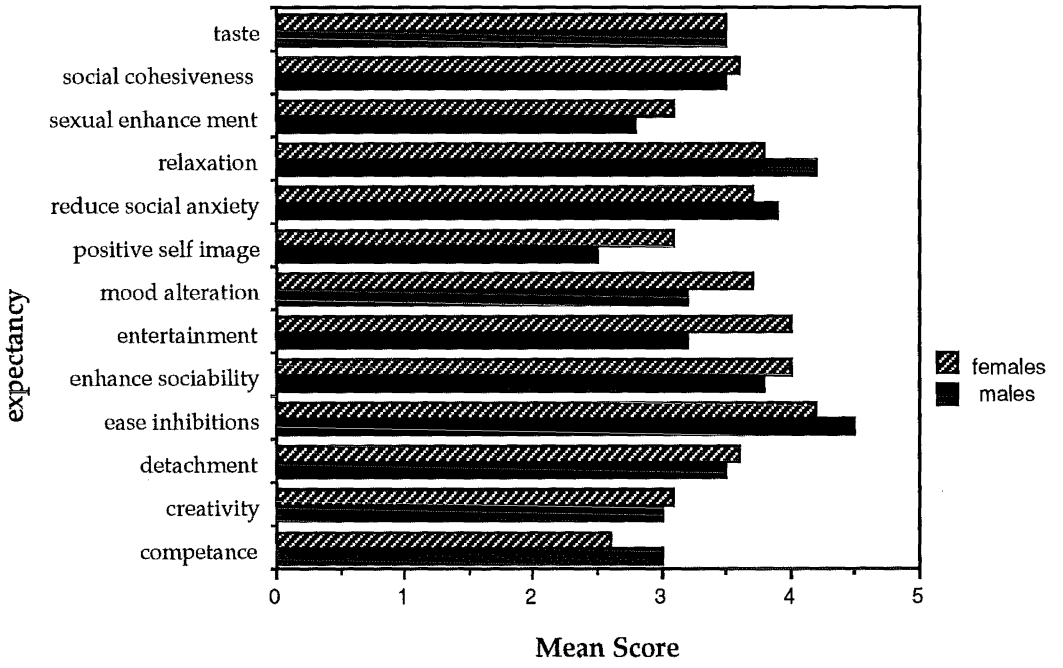

Figure 3: Male and female Mean Scores

Positive Expectancies

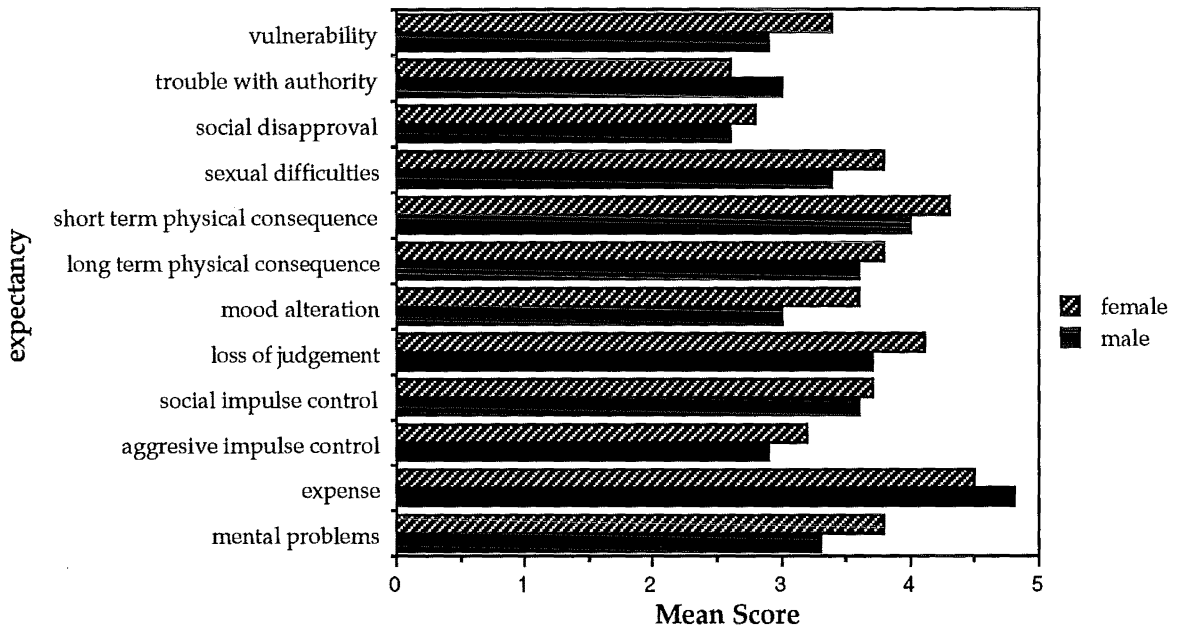

Figure 4: Male and Female Mean Scores

Negative Expectancies

Sex and Drinking Behaviour

Drinking behaviour Questionnaire

A two factor analysis of variance with independent variables race and sex revealed no differences between male (M = 40.8) and female (M = 39.8) for the drinking behaviour questionnaire $F(1,85) = .21$ $p = n.s$). An item by item analysis of this questionnaire using a series of two factor ANOVA's with race and sex the independent variables also revealed no significant sex differences for any of the items on this scale.

Drinking Diaries

A two factor ANOVA with independent variables of race and sex was conducted for the total amount of alcohol consumed in a week as recorded by the drinking diaries. Males (M = 241) were found to consume significantly more alcohol in a week than females (M = 125), $F(1,59) = 7.4$, $p > .05$

Drunkenness

A Chi square analysis was conducted revealing no significant differences in the number of males and females in the categories infrequently drunk, moderately frequently drunk and frequently drunk $\chi^2 (2) = 0.3$. $p = n.s$.

Table 5

Drunkenness by Sex

	Male	Female	Total
Infrequently Drunk	5	8	13
Moderately Frequently Drunk	16	23	39
Frequently Drunk	17	20	37
Total	38	51	89

Discussion

In the following discussion results from this study will be considered in relation to previous literature and the aims of the present research. The implications of the findings to an expectancy framework and related treatment methods will then be discussed. This will be followed by an analysis of the limitations of this study, and suggestions for future research.

The major goal of the present study was to address basic issues regarding the generalisability of previous findings regarding alcohol expectancies. The research was intended to expand on the current body of literature by using groups not previously examined, and employing non treatment samples of drinkers for the research. The chosen approach of extending a model developed within American culture to a New Zealand population has implications for the utility, particularly the universality, of Expectancy Theory.

Expectancies and Drinking Behaviour

Positive expectancies predicted drinking behaviour measured by amount of alcohol consumed, alcohol related problems, and frequency of

drunkenness. Heavier drinkers, subjects who reported more problems with alcohol and subjects who were more frequently drunk had stronger positive expectancies than light drinkers, non-problem drinkers and those infrequently drunk. These findings are consistent with previous expectancy research (Brown & Creamer; 1985, Brown, Goldman, & Christiansen, 1985, Critchlow, 1987; McCarthy, Morrison & Mills 1983) which found expectancy strength discriminated between drinker type.

Negative expectancies did not predict drinking behaviour for any of the groups. Again this is consistent with previous research which has found that negative expectancies are not as powerful predictors of drinking behaviours as positive expectancies. It has been suggested that this may be a result of negative expectancies being less immediate when initiating a drinking decision.

Race and expectancies

Maori and Pakeha were comparable in total positive expectancy strength. However, Pakeha considered negative effects of drinking as generally more important when making a decision about drinking than Maori.

Examination of differences in positive expectations between Maori and Pakeha reveals interesting patterns. For Maori, particularly strong alcohol expectancies such as competence and power and creativity may be a result of acculturative processes which have extended to an individual level. The process of acculturation has for Maori meant erosion of traditional community structures. Because of this there may be lessened opportunity for Maori to gain mana and status than there may have been in a traditional Maori community. Instead, the source of Mana and status may be through achievement in a Pakeha world, based on Pakeha values. Drinking may therefore be viewed as a means of regaining feelings of competence and power for Maori more than for Pakeha. Similarly Maori may view creativity as an important outcome of drinking because traditional methods of expressing creativity have been replaced by those of the dominant culture. The means by which the dominant culture express their creativity may not be appropriate or satisfying for Maori.

An examination of the specific negative expectancies in which Maori and Pakeha were different revealed that Pakeha tend to consider mental problems, loss of judgement, expense and sexual difficulties more than Maori. These may reflect qualities which are more important in Pakeha than Maori society. For example, Pakeha have more individualistic, materialistic values than Maori (Sachdev, 1990). These findings are also consistent with cross-cultural research that has found both Maori and

Pakeha perceive Maori as being more easygoing , happy-go-lucky and generous than Pakeha. Conversely, Pakeha are perceived as materialistic. Although conclusions based on stereotypes are tentative because stereotypes may not reflect reality, a general consistency within the literature in this area suggests these concepts are valid.

In contrast to Maori, Pakeha tended to consider the positive social functions of alcohol as motivations for drinking. This is consistent with research described previously which has found that Maori are regarded as happy, friendly and easygoing. The possession of these qualities indicates that Maori may be less inhibited in social situations than Pakeha who are perceived as arrogant and aloof. Furthermore, Maori may not consider enhanced sociability and reduced social anxiety as important motivations for drinking because they more often drink in large groups within which they have well developed personal relationships (Graves, Graves, & Semu, 1982).

Race and drinking behaviour

Maori and Pakeha have similar drinking patterns in terms of amount and frequency of drunkenness. This is consistent with research by Casswell (1980) who found only a small difference in median drinking intensity between Maori and Pakeha. The present research also found

Maori and Pakeha to be similar in levels of problems with drinking, an unexpected result considering differences in levels of alcohol related problems between Maori and Pakeha cited in the literature. A possible reason for the similarity of Maori and Pakeha in this study is that a disproportionate level of the sample were students, who have different drinking behaviours than the general population. Research has shown that college students drinking patterns may not be representative of the drinking patterns of the racial of ethnic groups from which they come. For example, research conducted in America has found that among college students whites drink more than non students whereas blacks drink less (Crowley, 1991).

Sex and Expectancies

Men and women in this sample were remarkably similar in both their drinking patterns and expectancy type. This result was unexpected as research has consistently revealed sex differences in drinking behaviours in New Zealand and internationally, and sex differences in expectancies internationally. The lack of any sex differences in total expectancy strength or strength of individual items suggests that women and men in New Zealand are more similar in their drinking motivations than they are in the United States, Canada and Ireland where expectancy research has revealed differences in expectancy type and strength between males and females (Teahan, 1987; Teahan, 1988).

Sex and Drinking Behaviour

Comparable drinking behaviours between males and females in terms of problems and frequency of drunkenness may reflect the trend in New Zealand over the last thirty years for women's drinking patterns to become increasingly similar to those of men. The high proportion of subjects who are students in this study may have influenced the results in this respect, as women's' and men's' drinking patterns are more similar for students than for the general population (Haworth-Hoeppner, Globetti, Stem, & Morasco, 1989).

The finding of differences between men and women in amount of alcohol consumed in a week is consistent with the findings of previous research. Physically, alcohol has more severe long and short term effects on women. Women may also drink less than men because of social restraints. For example, women are more likely to be primary care givers to children than men, and consuming large quantities of alcohol may not be compatible with this role. Although female drinking patterns are becoming increasingly similar to men's in New Zealand, there still exist considerable social sanctions on female drunkenness. Male drinking and drunkenness is part of the folk culture in New Zealand, whereas for females drinking alcohol is a relatively recent phenomena. Because of this, and differences in societies expectations of behaviour for females

and males, female drunkenness is not generally as accepted as male drunkenness.

Expectancy Theory - Implications of the present research

The findings of the present investigation that problem and non-problem drinkers, heavy and light drinkers and frequently and infrequently drunk subjects differ on expectancy strength and drinking behaviours provides evidence for the universality of the Expectancy Theory. Furthermore, differences in Maori and Pakeha expectancy type suggest cultural differences in the function alcohol serves for the two populations. These findings support the utility of the expectancy concept for a multicultural population in New Zealand.

The findings of the predictive power of expectancies in relation to problem drinking, heavy drinking and frequency of drunkenness for a bi-cultural sample in New Zealand suggest that these groups may benefit from therapies which incorporate modification of cognitions.

The results of this study suggest Maori and Pakeha consider different outcomes when making a drinking decision. However, the groups did not differ on measures of their actual drinking behaviours. This may be

attributed largely to social learning processes, which form the foundation of expectancy theory. For the present sample, similarities in drinking behaviours may be a result of societal rather than cultural influences. There is greater potential for cultural diversity in learning influences in Christchurch, where the proportion of Maori to Pakeha is smaller than that in the general population. Because of this it is more likely for the Maori subjects peer groups to be predominantly Pakeha. Previous research has revealed that perceptions of peer drinking are important in the formation of expectancies (Mooney 1991). Similarly, societal learning influences such as the mass media are Pakeha dominated. The finding of cultural differences in motivations for drinking suggests tailor made treatment programs emphasising cognitions may be appropriate.

The results of the present study revealing differences between Maori and Pakeha for type and strength of alcohol expectations provide support for the appropriateness of treatment programs which aim to modify attributions and cognitions in an internal direction. It has been suggested that cognitive behavioural techniques may be preferred to techniques based on the disease model such as Alcoholics Anonymous (AA) because these techniques are more focused on modifying patterns of maladaptive thought and actions which are unique to the individual, and are therefore less disruptive to an individuals cultural identity (Levinson, 1983). Here the emphasis on the individual is highlighted, and strategies are tailored to individual differences. This is in direct contrast to culture

specific therapies for problem drinking such as AA which rely on an acceptance of certain cultural values in their treatment programmes.

Limitations of the present research.

In considering the limitations of the present study, I will firstly describe general limitations of alcohol and cross cultural research before examining the specific limitations of this study.

A major problem with cross cultural research involving colonised sub-cultures such as the Maori people is that of defining racial groups. A high level of inter racial marriage in this a country has led to many people possessing a mixture of racial ancestry. Self categorisation of race may have therefore led to inconsistencies in racial divisions used in this study. Those who identify themselves as Maori may do so based on differing criteria, for example biological descent or knowledge and interest in Maori language and culture. In an area with fewer Maori such as Christchurch subjects may be more likely to have adopted the Pakeha culture and to categorise themselves Maori despite having weak links with Maori culture and strong links with Pakeha culture. This may reduce racial differences in drinking patterns.

A potential problem with alcohol research in general is that heavy alcohol use may be associated with other drug use (Saltz & Elandt, 1986), and it may be difficult to distinguish between effects alcohol and other drugs. However, as the percentage of very heavy alcohol users in this study was small, this was not considered to be a problem.

A specific problem with the present research is that of limited access to a broad cross-section of Maori in Christchurch. Because of this, there was a higher proportion of tertiary students in the sample than occur in this age range in the general population. It has been well documented that university students have unique drinking patterns in relation to the rest of the community. For example, students tend to binge-drink more commonly than the rest of the population, drinking moderately frequently, but consuming large amounts on these occasions (Keeling, 1988). Crowley (1991) found students were more likely to use alcohol but tended to drink less per day than non students of the same age. She also found that whites were most likely to drink if they were in college, but among blacks those who were in college were the least likely to drink. Although no research regarding drinking patterns of a cross cultural University population has been conducted in New-Zealand, it is possible that differences of this type may exist for Maori and Pakeha. If this is the case, the over representation of students in the present sample may be problematic.

The small proportion of subjects who reported problems with alcohol in response to item 17 on the drinking background questionnaire (6%) and the low rate of problems recorded on the Drinking Behaviour scale may indicate that those with severe alcohol problems chose not to participate in this research. This may have been true despite assurances of total confidentiality and anonymity. The possibility of a volunteer bias was investigated by Strohmetz, Alterman, and Walter (1990), among alcoholics in an alcoholic treatment effectiveness study. They found evidence for the existence of a volunteer bias. Analysis of this bias revealed that subjects who reported more problems with alcohol were also more reluctant to participate in research.

In the present study there was a very low response rate to a question concerning occupation of the respondent. This may be due to the possibility that subjects felt a response to this question may threaten their anonymity. The response rate was so low comparisons of the socio economic status of the subject groups were not useful for comparative purposes. In addition to verbal assurances, written assurances of anonymity may have helped to remedy this problem. Because of this, it was difficult to eliminate the possibility that differences between Maori and Pakeha were due to variance in socio economic status rather than cultural differences. However, because both Maori and Pakeha subjects

were obtained for each group collected it was considered that subjects within each group would have comparable socio economic status.

Limitations of the questionnaires

The pen and paper format of the Questionnaire eliminated potential subjects without literacy skills. Although all questionnaires were checked for potentially ambiguous or difficult wording, it is possible that some language may have not been readily understood by some subjects who did participate. The extent of this problem is hard to determine, however, and the general consistency of responses suggest this problem was not a major one.

Because the questionnaires used in this study were developed from a western perspective, they may incorporate features of limited relevance to other cultures. For example, emphasis on the individual which is fundamental to psychological research of this type may be inappropriate for Maori as the Maori culture is collectivist in nature. Integrative and holistic thinking is valued over analytical thought in traditional Maori society. Family or tribal affiliation is a core construct in Maori society, and personal identity and obligations to the family take precedence over individual needs (Sachdev, 1990). The emphasis on individual perceptions in the questionnaires used in this study may mean values

and perceptions important to the Maori people are not recorded. In addition to this, the requirement for subjects to answer questions without consultation with family or peers may limit the scope of data collected for this group.

Drinking Behaviour Questionnaire

There may have been a bias present in items composing the drinking behaviour questionnaire. Though they were checked for cultural appropriateness, there may have been appropriate questions related to drinking behaviours that were not asked, and some which were less relevant to the Maori group than to the Pakeha group. For example, there may be culture-specific drinking problems particularly concerning Maori people which have not been investigated in the literature and as a consequence were not investigated in this study. The development of this instrument was from a western perspective. As a consequence, value laden and culture specific items and perspective's may be included which are more relevant to Pakeha than Maori. For example, item 4 states 'I sometimes drink against my doctors advice'. This question may be less appropriate for Maori than it is for Pakeha as Maori are generally more reluctant than non-Maori to visit the doctor (Johnson and Hannifin, 1987).

The Drinking Diary

The relatively low response rate to the drinking diary suggests this format may be problematic. The placement of the drinking diary directly after a series of questions relating to problems with drinking may lead to an under-reporting of drinking for reasons of social desirability. In this format amount of drinking may be perceived by subjects as relating to problem drinking, causing them to be cautious about recording what they may consider to be excessive drinking patterns.

There appeared to be a problem with some respondents misinterpreting the requirements of the diary. Two respondents put a monetary sum in the column labelled amount instead of the required amount of alcohol consumed. Some respondents did not answer the question at all, indicating that it was overlooked or that it was too time consuming, possibly because it was placed at the end of the third questionnaire. It may also indicate difficulty in remembering drinking occasions in the last week. A large proportion of respondents noted that they had drunk nothing over the previous week, although they did generally drink alcohol. Some respondents also noted that the drinking patterns described were not typical. Casswell and Wyllie (1988) noted that respondents assessment of their typical drinking may provide a more accurate picture than their last few drinking occasions since most drinkers do not have a strictly regular pattern of drinking. However, it

was considered that atypical drinking patterns would average out, leaving an overall more accurate picture of drinking. Assessments of typical drinking which leave more room for unintentional error in reporting drinking behaviour, and under or over-reporting according to social desirability.

Suggestions for future research

The present research investigated expectancies in a non-clinical population, supporting the usefulness of this concept to a cross cultural population in New - Zealand. Future research could extend this research by examining the alcohol related expectancies of subjects with substantial alcohol related problems. The use of a larger sample size in future research of this type would increase reliability and generalisability of conclusions.

Although the current study revealed that negative expectancies did not predict drinking behaviour, further in depth investigations of the role of negative expectancies may be fruitful.

As the present study revealed that expectancy type differed for Maori and Pakeha interesting comparisons may be made to other subcultures in

New Zealand, for example, Pacific Islanders. Rigid controlling for the effects of socio economic status should be employed in future research of this type.

References

ALAC info (1992) *Alcohol consumption in New-Zealand* Alcohol Liquor Advisory Council Wellington

Archer, A. (1990). *Maori and European Attitudes, Motivations and practices towards Alcohol Consumption With Specific reference to Drinking and Driving* Sociology Dept University of Canterbury.

Bailey J P M (1991) *Ethnicity and Drinking Driving in New-Zealand* D.S.I.R Chemistry Report no. cd2415

Bales R F (1959) Cultural differences in rates of alcoholism. In G McCarthy (Ed), *Drinking and intoxication* pp 263-277 Glenoe, IL: Free Press

Bradbury J (1983) *Violent Offending and drinking patterns* Institute of Criminology: Victoria University of Wellington

Brickman, P., Rabinowitz, V. C., Karuza, J., Coates, D., Cohn, E., & Kidder, L. (1982). Models of helping and coping. *American Psychologist, 37*, 368-384.

Brown S A Goldman M S Inn A Anderson L R (1980) Expectations of Reinforcement From Alcohol; Their Domain and Relation to Drinking Patterns *Journal of Consulting and Clinical Psychology, 48(4)* , 419-426.

Brown, S. A., Goldman, M. S., & Christiansen, B. A. (1985). Do alcohol Expectancies mediate drinking patterns of adults? *Journal of Consulting and Clinical Psychology, 55,* 512-519

Casswell S and Martin C (1986) *From a public Health Perspective-shaping attitudes towards alcohol in New- Zealand* , Auckland University: Alcohol Research Unit.

Casswell, S. & Wyllie, A. C., (1988). *Drinking in New-Zealand: A Survey Report* Auckland University: Alcohol Research Unit.

Casswell, S. Stewart, J. Connolly, G. & Silva, P. (1991). A Longitudinal study of New-Zealand Children's experience with Alcohol. *British Journal of Addiction , 86* , 277-286.

Chaudron, C. D., & Wilkinsen, D. A. (1988). *Theories on Alcoholism,* Addiction Research Foundation: Toronto

Chetwynd, S. J., & Pearson, V. (1983). Alcohol Problems among Women Working in The Home: Prevalence and Predictors. *Australian and New- Zealand Journal Of Psychiatry ,17(3)* , 259-264

Christiansen, B. A, Goldman M., & Inn, A. (1982) Development of alcohol related expectancies in adolescents: separating pharmacological from social learning influences. *Journal of Consulting and clinical Psychology 50(3),* 336-344.

Christiansen, B. A., Teahan, J. E. (1987). Cross-cultural Comparisons of Irish and American adolescent drinking practices and beliefs. *Journal of studies on alcohol , 48(6)* , 558-562.

Christiansen, B. A., & Goldman, M. S. (1983). Alcohol related expectancies versus Demographic/ background variables in the prediction of adolescent Drinking. *Journal of Consulting and Clinical Psychology, 51* , 249-257.

Christiansen, B. A., Brown, S. A., & Goldman, M. S. (1989). The broader perspective on expectancy research: comment on Corcoran and Parker, Psychology *of Addictive Behaviours 3(2)* , 80-84.

Christiansen, B. A., Goldman, M. S., & Brown, S A., (1985) The differential development of adolescent alcohol expectancies may predict adult alcoholism. *Addictive Behaviors, 10(3),* 299-306.

Critchlow, B. (1987). A Utility Analysis of Drinking. *Addictive Behaviours , 12* , 269-274.

Crowley, J. E. (1991). Educational status and drinking patterns; how representative are college students? *Journal of Studies on Alcohol , 52 (1)* , 10-16.

Dane, F. C. (1990). *Research Methods.* Brooks/Cole publishing Company: California.

Danko, G. P., Johnson, R. C., Nagoshi, C. T., & Yuen, S. H. (1988). Judgements of 'normal' and 'problem' alcohol use as related to reported alcohol consumption. *Alcoholism Clinical and Experimental Research , 12(6)* , 760-768.

Davis, L. J., & Morse, R. M. (1987). Age and sex differences in the responses of alcoholics to the self-administered alcoholism Screening test. *Journal of Clinical Psychology, 43(3)* , 423-430.

Deaux, K., & Wrightsman, L. S. (1984). *Social Psychology in The '80's* . Brooks/Cole: Monterey.

Donovan, D. M., & Marlatt, G. A. (1980). Assessment of Expectancies and Behaviours Associated with Alcohol Consumption. Journal *of Studies on Alcohol , 41(11)* 1153-1185.

Durie, M. H., (1985). A Maori Perspective of Health. *Social Science and Medicine , 20(5),* 482-486.

Elvy, G. A. (1985). *Development of The Canterbury Alcoholism Screening Test* . ALAC

Elvy, G. A., & Wells, J. E. *S.C.A.S.T.* , Christchurch: Alcohol Research Committee.

Emrick, C. D., & Aarons G. A. (1990). Cognitive Behavioural treatment of problem drinking. In H. B. Milkman, L. I. Sederer (Eds)

Treatment Choices For Alcoholism and Substance Abuse. Lexington, U.S: Heath and Company.

Galanter, M. (Ed). (1984).*Recent Developments in Alcoholism Vols !&2* , New-York: Plenum Press.

George, W. H., McAfee, M. P. (1987). The Effects of Gender and drinking Experiences on Alcohol Expectancies About Self and Male Versus Female Other. *Social Behaviour and Personality, 15(2)* , 133-144

Goldman, M. S., Brown, S. A., & Christiansen, B. A. (1987). Expectancy Theory: Thinking about Drinking. In H. T. Blane and K. E. Leonard *Psychological Theories of Drinking and Alcoholism.* pp 181-217. The Guilford Press: U.S.A.

Graves, T. D., & Graves, N. (1985). As others see us: New-Zealanders images of themselves and migrant groups. In D. R. Thomas, N. B. Graves, & T. D. Graves, (Eds). *Patterns of Social Behaviour: New-Zealand and the South Pacific.* Psychology Research series No 17. University of Waikato: Hamilton.

Graves, T. D., Graves, N. B., Semu, V. N., & Sam, I. D. (1982). Patterns of Public Drinking in a Multiethnic Society; A Systematic Observational study. *Journal of Studies on Alcohol, 43 (9),* 990-1009.

Grube, J., Morgan, M., Seff, M. (1989). Drinking Beliefs and Behaviours among Irish Adolescents. *International Journal of the Addictions , 24 (2) ,* 101-112

Gustafson, R. (1986). Can Straight forward Information Change Alcohol -Related Expectancies? *Perceptual and motor Skills , 63(2 pt2).*

Heath, D. B. (1984). Cross-cultural studies of alcohol use. In M. Galanter (ed). *Recent Developments in Alcoholism, Vol 2* pp 405-445. New york: Plenum.

Heath, D. B. (1987). Anthropology and Alcohol Studies: Current Issues. *Annual Reveiw of Anthropology, 16* pp 99-120.

Jackson, C. P., & Matthews, G. (1988) The prediction of habitual alcohol use from alcohol related expectancies and personality. *Alcohol and Alcoholism 23(4) 305-314.*

Haworth-Hoeppner,S., Globetti, G., Stem, J., & Morasco, F. (1989). The quantity and frequency of drinking among undergraduates at a southern university. *The International Journal of the Addictions, 24(9),* 829-857.

Johnson, C., & Hannifin, J. (1987). *A Review of Drug Treatment Services in New-Zealand.* Manuwatu Society on Alcohol and Drug use: Palmerston North

Johnson, R. C., Nagoshi, C. T., Ahern, F. M., Wilson. J. R. (1987). Cultural Factors as Explanations for Ethnic Group Differences in Alcohol Use in Hawaii. *Journal of Psycho active Drugs. 19(1)* , 67-75.

Kilty, K. M. Styles of Drinking and types of Drinkers. (1983). *Journal of Studies on Alcohol, 44* 797-816.

Kline, R. B. (1990). The relation of alcohol expectancies to drinking patterns among alcoholics: generalisations across gender and race. *Journal of studies on alcohol , 51(2)* 175-182

Lang, P. D., Goeckner, L. A., Adesso, E., & Marlatt, H. S. (1975) Effects of Alcohol on Aggression in Male Social Drinkers. *Journal of Abnormal Psychology, 4(5)* , 508-518.

Laurs M. R. (1990-91). Alcohol Prevention in New-Zealand: Working Towards a National alcohol Policy. *International Journal of the Addictions , 25 (4a)* , 513-532.

Leigh, B. C. (1989). Attitudes and Expectancies as Predictors of Drinking habits; A comparison of three scales. *Journal of Studies on Alcohol 50 (5)* , 432-440.

Levinsen, D. (1983). Current status in the field: An anthropological perspective on the behaviour modification treatment of alcoholism. In M Galanter (Ed), *Recent Developments in Alcoholism (vol 1),New York: Plenum Press.*

McAndrew, C., & Edgerton, R. (1969).*Drunken Comportment: A Social Explanation.* Chicago: Aldine.

Mariano, A. J., Donovan, D. M., Walker, P. S., Mariano, M. J. (1989). Drinking-Related locus of control and the drinking Status of Urban Native Americans. *Journal of Studies on Alcohol , 50 (4),* 331-338.

Marlatt, G. A., and Donovan, D. M., (1982). Behavioural psychology approaches to alcoholism. In E. M. Pattison & E. Kaufman, *Encyclopedic Handbook of Alcoholism,* 560-77, New york: Gardner Press.

Marlatt, G. A., Baer, J. S., Donovan, D. M., & Kivlahan, D. R., (1988). Addictive Behaviours: Etiology and Treatment *Annual Review of Psychology , 39,* 223-252.

Mc Carty, D., Morrison,S., & Mills, K. C. (1983). Attitudes, beliefs and Alcohol use *Journal of Studies on Alcohol, 44* , 328-341

McAnulty, R. D., McGuire, L. E., Minder, C., McAnulty, D.P. (1989). A cross-cultural comparison of attitudes toward alcohol among French and United States college students. *The International Journal of The Addictions, 24(12),* 1229-1236.

Mooney, D. K., Corcoran, K. J, (1990). Personal and Percieved Alcohol Expectancies: Their influences on Alcohol Consumption. *The Psychology of Addictive Behaviors 5 (2),* 85-92.

Mooney, D. K., Fromme, K., Kilahan, D. K., Marlatt, G. A. (1987). Correlates of alcohol consumption: sex, age, and expectancies relate differentially to quantity and frequency. *Addictive Behaviors, 12,(3),* 235-240.

Murchie, E. (1984) *Rapuora: Health and Maori Women.* Maori Women's Welfare League, Wellington.

O'Conner, J. (1978). *The Young Drinkers* , London: Tavistock publishers.

Oei, T. P. S,. Jones, R. (1986). Alcohol-related expectancies: Have they a role in the understanding and treatment of problem drinking? *Advances in alcohol and substance Abuse 6(1)* , 89-105.

Orchard, H. K. *New-Zealand Alcohol Consumption Statistics 1955-1991* Alcohol Liquor Advisory Council, Wellington.

Pittman, D. J., & Snyder, C. R. (1962). *Society, Culture and Drinking Patterns* . New York: Wiley.

Polich, J. M., (1982). The validity of self reports in alcoholism research *Addictive Behaviors,* 7 123-132.

Pomare, E., & de Boer, G. (1988). *Haurou; Maori standards of health. A study of the years 1970-1984* , Wellington Medical Research Council Wellington: Department of Health.

Ritchie, J., & Ritchie, J. (1985). *E Tipu e Rea: Polynesian Socialisation and Development.* University of Waikato:Hamilton.

Roehling, P. V., Goldman, M. S. (1987). Alcohol Expectancies *Psychology of Addictive Behaviours 1(2),* 108-113.

Rohsenow, D. J. (1983). Drinking habits and expectancies about alcohol's effect for Self versus others, *Journal of Consulting and Clinical Psychology 51* , 752-756.

Sachdev, P. (1990). Mental health and illness of the New-Zealand Maori. *Trans cultural Psychiatric Research Review* , 27 85-111.

Saltz, R. F., Elandt, D. (1986). College Student drinking studies 1976-1985. *Contemporary Drug Problems 13(1),* 117-159.

Sher, K. J. (1985). Subjective effects of alcohol: the influence of setting and individual differences in alcohol expectancies. *Journal of Studies on Alcohol 46* , 137-146.

Sher, K. J., Walitzer, K. S., Wood, P. K., & Brent, E. E. (1991). Characteristics of children of alcoholics: putative risk factors, substance abuse and psychopathy. *Journal of Abnormal Psychology 100(4),* 427-448.

Smith, A. H., & Peirce, N. E. (1984). Determinants of differences in mortality between Maoris and Non-Maoris aged 15-64 *New-Zealand Medical Journal* , *97,* 101-108.

Sobell, L. C., & Sobell, M. B., (1978). Validity of self-reports in three populations of alcoholics. *Journal of Consulting and Clinical Psychology , 46 ,* 901-907.

Social Science Research Council (1954). Acculturation: An exploratory formulation. *American Anthropologist 56* 973-1002.

Stacy, A. W., Widaman, K. F., Marlatt, G. A. (1990). Expectancy models of alcohol use. *Journal of Personality and Social Psychology, 58 (5),* 918-928

Strometz, Alterman, and Walter. (1990). Subject selection bias in alcoholics volunteering for a treatment study. *Alcoholism Clinical and Experimental Research ???* 736-738

Teahan, J. (1988). Alcohol Expectancies of Irish and Canadian Alcoholics *International Journal of he Addictions , 23(10), 1057-1070.*

Teahan, J. E., (1987). Alcohol expectancies, values, and drinking of Irish and U.S.. Collegians. *The International Journal of the Addictions, 22 (7),* 621-638.

Thombs, D. L. (1991). Expectancies versus demographics in discriminating between college drinkers: implications for alcohol abuse prevention. *Health education Research; Theory and practice , 6(4),* 491-495.

Thombs, D. L. (1993). The differentially discriminating properties of alcohol for female and male drinkers. *Journal of Counselling and Development, 71 (3),* 321-325.

Warburton, D. M. (1992). *Addiction controversies..* Chur, Switzerland: Harwood academic publishers.

Webb, G. R., Redman, S., Sanson-Fisher, R. W., Gibberd, R. W. (1990). Comparison of a quantity - frequency method and a diary method of measuring alcohol consumption. *Journal of Studies on Alcohol 51(4)* 327-330.

Werch, C. E. (1990). Two procedures to reduce response bias in reports of alcohol consumption. *Journal of studies on alcohol, 51(4),* 327-330.

Wrightsman, L. S. (1977). *Social Psychology (second Edition)* . Brooks/Cole: Monterey.

Wyllie, A. J., Casswell, S. A. (1991). A qualitative investigation of young men's drinking in New-Zealand. *Health Education Research; Theory and Practice , 1* 49-55.

Appendices

Alcohol expectancy Questionnaire

Below is a list of thirteen positive consequences, which many people expect to result from drinking. Please rate these according to their importance to you when making a decision about drinking.

Use the following 1 to 7 scale, and circle your choice:

1	2	3	4	5	6	7
Not			Neither			Extremely
Important			Important			Important
at all			Nor unimportant			

1. Competence and Power (feel more powerful and competent; feel more adult and mature; able to control events)

1 2 3 4 5 6 7

2. Creativity (Ideas flow more freely, can think better)

1 2 3 4 5 6 7

3. Detachment from the World (feel detached and indifferent to things)

1 2 3 4 5 6 7

4. Ease of Inhibitions (feel less restricted by social conventions; easier to let myself go)

1 2 3 4 5 6 7

5. Enhance Sociability (Better able to make new friends; become more interesting to people and talk more easily)

1 2 3 4 5 6 7

6. Entertainment Value (Inexpensive entertainment; helps pass time)

1 2 3 4 5 6 7

7. Mood Alteration (To cheer up when feeling depressed or sad; feel more optimistic about future)

1 2 3 4 5 6 7

8. Positive Self Image (Feel better about self ; like self more)

1 2 3 4 5 6 7

9. Reduce Social Anxiety (overcome shyness; easier to relate to opposite sex; feel more assertive with others)

1 2 3 4 5 6 7

10. Relaxation (Able to sleep better; relief of tension; help me unwind)

1 2 3 4 5 6 7

11. Sexual Enhancement (More sexually responsive; become a better lover; enjoy sex more)

1 2 3 4 5 6 7

12. Social Cohesiveness (Feel more a part of the group; feel closer to others)

1 2 3 4 5 6 7

13. Taste (Enhance the flavour of food; enjoy the flavour of alcoholic beverages)

1 2 3 4 5 6 7

Below is a list of twelve negative consequences which many people expect to result from drinking. Please rate them in the same way that you rated the positive consequences, again using the following scale:

1	2	3	4	5	6	7
Not			Neither			Extremely
Important			Important			Important
at all			Nor unimportant			

1. Mental Problems (Less able to solve problem or do intellectual tasks; become less creative; ideas flow with difficulty)

1 2 3 4 5 6 7

2. Expense (Spend too much money when drinking; get into debt)

1 2 3 4 5 6 7

3. Aggressive Impulse Control (loose temper easily; become physically harmful; start fights)

1 2 3 4 5 6 7

4. Social Impulse Control (Not careful about what I say about myself and/or others; do and say silly things in public that later embarrass me; others like me less)

1 2 3 4 5 6 7

5. Loss of Judgement (Difficulty making good decisions for myself and others; drive when I shouldn't)

1 2 3 4 5 6 7

6. Mood Alteration (Feel more irritable; become depressed or sad; feel guilty or shameful)

1 2 3 4 5 6 7

7. Long-Term Physical consequences (Physical addiction; liver disease; brain tissue destruction)

1 2 3 4 5 6 7

8. Short-Term Physical Consequences (Pass out; become sick; have a hangover; memory difficulties)

1 2 3 4 5 6 7

9. Sexual Difficulties (Less able to perform sexually; diminishes sexual experience; impotence

1 2 3 4 5 6 7

10. Social Disapproval (Drinking not approved of by family and friends; religious prohibitions)

1 2 3 4 5 6 7

11. Trouble with Authority (Get into trouble with the law, boss; driving offences)

1 2 3 4 5 6 7

12. Vulnerability (Others may take advantage of me; less self protection)

1 2 3 4 5 6 7

Drinking Behaviour Questionnaire

Please circle the answer which is most true for you, using the following 5 point scale:

1 = Strongly disagree

2 = mildly disagree

3 = neither agree or disagree

4 = mildly agree

5 = strongly agree

1) I drink before lunch fairly often.

1 2 3 4 5

2) After the first glass or two of alcohol I feel a craving for more.

1 2 3 4 5

3) I find that I am thinking a lot about alcohol.

1 2 3 4 5

4) I sometimes drink against my doctor's advice.

1 2 3 4 5

5) When I drink a lot of alcohol, I tend to eat less.

1 2 3 4 5

6) In the morning I sometimes feel that I might be sick (vomit).

1 2 3 4 5

7) I have found that my hands have been trembling a lot.

1 2 3 4 5

8) I have used alcohol to get rid of trembling or the feeling that I might be sick.

1 2 3 4 5

9) I have been criticised at work because of my drinking.

1 2 3 4 5

10) I prefer to drink alone.

1 2 3 4 5

11) I think I am in worse shape because of my drinking.

1 2 3 4 5

12) I have a guilty conscience about drinking.

1 2 3 4 5

13) In order to cut down on my drinking, I have felt it necessary to limit it to certain occasions or to certain times of the day.

1 2 3 4 5

14) I feel I should drink less.

1 2 3 4 5

15) I think that without alcohol I would have fewer problems.

1 2 3 4 5

16) When I am upset, I drink alcohol to calm down.

1 2 3 4 5

17) There are times when I'd like to stop drinking.

1 2 3 4 5

18) I would get along better with my spouse/partner/the people I'm closest to if I didn't drink.

1 2 3 4 5

19) I have tried to do without any alcohol at all.

1 2 3 4 5

20) I have been told that my breath smells of alcohol.

1 2 3 4 5

How much have you drunk during the past week? (Start with today and work through the last 7 days.)

Day	Time	Beverage	Amount
	(Morning, afternoon, evening)		
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Saturday			
Sunday			

Drinking background questionnaire

Occupation?	
Sex (Tick One):	Male Female
Age?	In years
Marital Status (Tick One):	Married/Defacto Single Separated Widowed Divorced
If married, number of dependent children?	
Race (Tick One):	Pakeha Maori Samoan Cook Islander Niuean Tongan Indian Other (specify):

Religious affiliation?	
Do you drink alcohol? (Tick One)	Yes No
How old were you when you began drinking alcohol regularly? (Tick One)	In Years 0 - 10 10-15 15-20 Over 20
How often do you have a drink containing alcohol? (Tick One)	Never Monthly or less 2 - 4 times a month 2 - 3 times a week 4 or more times a week
Of the times that you drink, how often do you get drunk? (Tick One)	Never Monthly or less 2 - 4 times a month 2 - 3 times a week 4 or more times a week

Where do you normally drink? (Tick whichever apply)	Home Hotels Restaurants Friends' houses Other (Please specify)
Who do you usually drink with? (Tick any that apply)	Family Friends Alone Other (Please specify)
Do/Did either of your parents drink? (Tick One)	Yes No
Do/Did either of your parents have a drinking problem? (Tick One)	Yes No
What time of day do you normally drink? (Tick whichever apply)	Morning Afternon Evening
Do you consider that you have a problem with alcohol?	Yes No

Would you prefer to drink in a large group (5 or more people)? (Tick One)	Yes No